

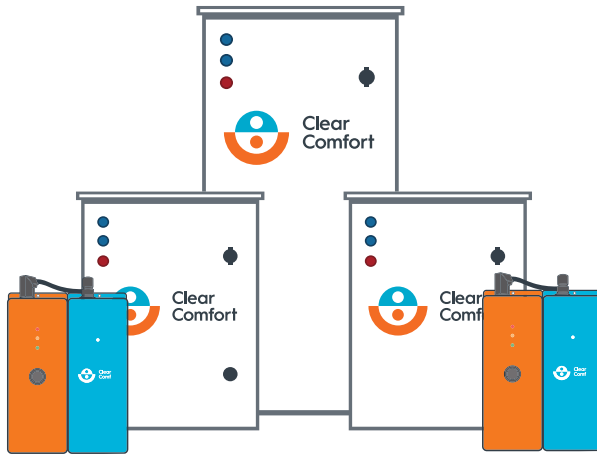


Swim Happy.™

COMMERCIAL MANUAL

Clear Comfort Commercial Pool & Spa Systems

Patented Hydroxyl-Based Advanced Oxidation (AOP)
Installation, Operations & Maintenance Manual



IMPORTANT SAFETY INSTRUCTIONS



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version, scan the QR code or visit:
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We're here to help

Have questions? For assistance, contact us:

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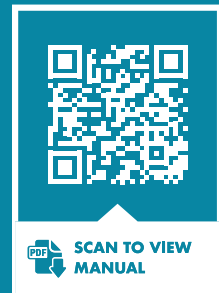


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WARRANTY

Clear Comfort warrants all Equipment to be free from defects in material or workmanship under normal use and service. Clear Comfort, Inc. at its discretion may repair or replace the Equipment or parts thereof. The Company's warranty does not cover any Equipment that has been altered or changed in any way by any person not authorized by Clear Comfort, INC.

THIS CONSTITUTES THE SOLE WARRANTY MADE BY CLEAR COMFORT, INC. EITHER EXPRESSED OR IMPLIED. THERE ARE NO OTHER WARRANTIES EXPRESSED OR IMPLIED WHICH EXTEND BEYOND THE FACE HEREOF, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL CLEAR COMFORT, INC. BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AND CUSTOMER'S REMEDIES ARE LIMITED TO REPAIR OR REPLACEMENT OF NONCONFORMING CLEAR COMFORT SYSTEMS OR PARTS.

This equipment was inspected before shipment from our plant. To original purchasers of this equipment, Clear Comfort Water Inc. ("Clear Comfort"), warrants its Clear Comfort Systems to be free from defects in materials and workmanship for a period of FIVE (5) years from the date of purchase. Replacement Cartridges and cylinders are warranted for a period of ONE (1) year from the date of purchase.

Parts which fail or become defective during the warranty period, except as a result of freezing, negligence, improper installation, use, or care, shall be repaired or replaced, at our option, without charge, within 90 days of the receipt of defective product, barring unforeseen delays.

To obtain warranty replacements or repair, defective components or parts should be returned, transportation paid, to the place of purchase, or to the nearest authorized Clear Comfort service center. For further Clear Comfort dealer or service center information, contact Clear Comfort customer service department.

Clear Comfort shall not be responsible for cartridge, removal and/or re-installation labor or any other such costs incurred in obtaining warranty replacements.

The Clear Comfort Products warranty does not apply to components manufactured by others. For such products, the warranty established by the respective manufacturer will apply.

This warranty shall be voided if at any time: (i) Customer attempts to make any internal changes to any of the components of the Equipment; (ii) the power supplied to any part of the Equipment exceeds the Equipment's operating parameters; (iii) any external device attached by Customer creates conditions exceeding the Equipment's operating parameters; (iv) the Equipment is tampered with; or (v) the serial number is covered, removed or defaced. Clear Comfort, Inc. reserves the right to seek damages if its system is tampered with, reverse engineered, or if Customer takes any other actions to interfere with the operation or integrity of the Clear Comfort system.

No Other Warranties

To the maximum extent permitted by applicable law, Clear Comfort disclaims all other warranties, either expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the product(s), part(s) and/or any accompanying written materials.

Procedure for Obtaining Performance

In order to obtain the benefits of this warranty, the customer who made the original retail purchase must contact the Clear Comfort Technical Service Department as soon as possible after discovery of the product-related issue, but in no event later than the expiration date of the respective warranty periods provided herein. Upon receipt of this communication, Clear Comfort will promptly notify the customer of the address to which the product may be shipped. The customer shall then ship the product, freight prepaid, to the address indicated, together with a "RETURN GOODS AUTHORIZATION" form obtained from Technical Service and a brief description of the problems encountered. Unauthorized returns will not be accepted. Freight must be prepaid by customer.

Warranties or Representations by Others

No third party has any authority to make any warranties or representation concerning Clear Comfort or its products. Accordingly, Clear Comfort is not responsible for any such warranties or representations.

To activate & validate your warranty, you must submit your warranty card or fill out our warranty form on clearcomfort.com/warranty within 1 year of your ship date from Clear Comfort

GENERAL INFORMATION

IMPORTANT SAFETY INSTRUCTIONS

1. READ AND FOLLOW ALL INSTRUCTIONS.**2. For cord connected/convertible units:**

DANGER – Risk of injury.

a. Replace damaged cord immediately.

b. Do not bury cord.

c. Connect to a grounding type receptacle only.

3. For all permanently connected units intended for use on 15 or 20 ampere, 125 volt or 240 volt, single phase branch circuits:

WARNING – Risk of Electric Shock. Connect only to a branch circuit protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the circuit is protected by a GFCI.

4. For all cord connected units other than storable pool pumps: **WARNING** – Risk of Electric Shock. Connect only to a grounding type receptacle protected by a ground-fault circuit interrupter (GFCI). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI.

5. For all permanently connected units: **WARNING** – Risk of Electric Shock. Connect only to a branch circuit protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI.

6. For units intended for above-ground storable swimming pools: Do not bury cord. Locate cord to minimize abuse from lawn mowers, hedge trimmers, and other equipment.

7. For all cord and plug connected units: **WARNING** – To reduce the risk of electric shock, replace damaged cord immediately.

8. For units intended for above ground storable swimming pools: **WARNING** – To reduce the risk of electric shock, do not use extension cord to connect unit to electric supply; provide a properly located outlet.

9. When the modified air is introduced into the pool or spa water via the

existing plumbing, the biocide is produced. Some of the remaining activated atoms either keep minerals dissolved in the water or remove minerals that were previously deposited.

10. This unit is to be installed in accordance with the installation instructions, the applicable plumbing and building codes, the applicable state and local laws and regulations, and the requirements of the Authority Having Jurisdiction.

11. When installing and using this equipment, basic safety precautions should always be followed including the following.

12. WARNING - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

13. WARNING - Do not sit or stand on unit.

14. WARNING: UV radiation is dangerous for the eyes and skin. Do not operate the UV-C emitter outside the appliance. (IEC 60335-2-109).

15. If it is intended that replacement of the UV-C emitter can be carried out by the user, the appliance is marked with "Read the instructions" or with symbol ISO 7000-0790 (2004-01). (IEC 60335-2-109).

16. Appliance contains a UV-C emitter. (IEC 60335-2-109).

17. Unintended use of the appliance or damage to the housing may result in the escape of dangerous UV-C radiation. UV-C radiation may, even in little doses, cause harm to the eyes and skin. (IEC 60335-2-109).

18. Appliances that are obviously damaged must not be operated. (IEC 60335-2-109).

19. WARNING - Replacement of the UV-C emitter is NOT allowed by anyone other than Clear Comfort.

20. Appliance must be disconnected from the supply before replacing the UV-C emitter. (IEC 60335-2-109).

21. SAVE THESE INSTRUCTIONS.

ELECTRICAL SAFETY

- Do not service the machine when the power is ON.
- The power supply wire gauge and insulation must meet the temperature and power requirements.
- To avoid personal injury never touch exposed electrical connections or components while the power is ON.
- Do not install/service the Clear Comfort system if you or the machine is standing in water with the power ON.
- Protect the power cord from being walked on or pinched, particularly at plugs and the point where they exit from the system.
- The device must be properly connected to the correct power source (either 60Hz 120Vac or 240Vac) using the supplied power cord in accordance with the local electrical code. If possible the unit should be hardwired to the pump circuit and controlled by the pump circuit (rather than hardwiring, an appropriate 120Vac or 240Vac receptacle outlet and plug may be used to connect to the pump controlled circuit).

- If the unit is being wired to standalone AC power (i.e., not through the pump circuit on either 120Vac or 240Vac) it should be installed with its own timer circuit and plugged in through a Ground Fault Circuit Interrupt (GFCI) and the timer should be set to reflect the pool or tub’s hours of operation. Regardless if hardwired or standalone connected, the electrical connection must be made in accordance with the local electrical code.

GROUNDING

The Clear Comfort, Inc. system must be properly grounded. An electrical ground connection to a reliable earth ground is essential for safe operation. Without an electrical ground, all accessible conductive components (including knobs and controls that appear insulated) can render an electrical shock.

GENERAL SAFETY

Use personal protective equipment (steel toe shoes, hearing protection, eye protection) when installing the Clear Comfort system. Follow ladder safety requirements.



STANDARD CLEAR COMFORT SYSTEM DESCRIPTIONS

KEY FEATURES

This manual covers how to install, use, and maintain the commercial Clear Comfort AOP systems: CCW100 Dual, CCW300A, CCW300, and CCW500. Installation takes 1-4 hours with minimal impact on circulation or electrical setups. Once installed, the AOP system starts working immediately for any size aquatics facility. Regular water testing and maintenance (pH, alkalinity, etc.) are needed, similar to chemical systems.

STANDARD SPECIFICATIONS

Setup Options:

- **CCW100 Dual, CCW300A & CCW300:** Suitable for pole or wall mounting. Drill holes in the back panel as required.
- **CCW500:** Floor-standing only. Can be secured to floor for seismic safety.

Power Supply:

- All models are equipped with a 10 ft. power cord. Compatible with pump circuits or GFCI outlets. See the specification label on system.

Installation and Operating Conditions:

- **Location:** Install the system within 30 feet of the injection site, in a clean and protected area.
- **Ambient Temperature:** 40°F – 90°F (5°C – 40°C)

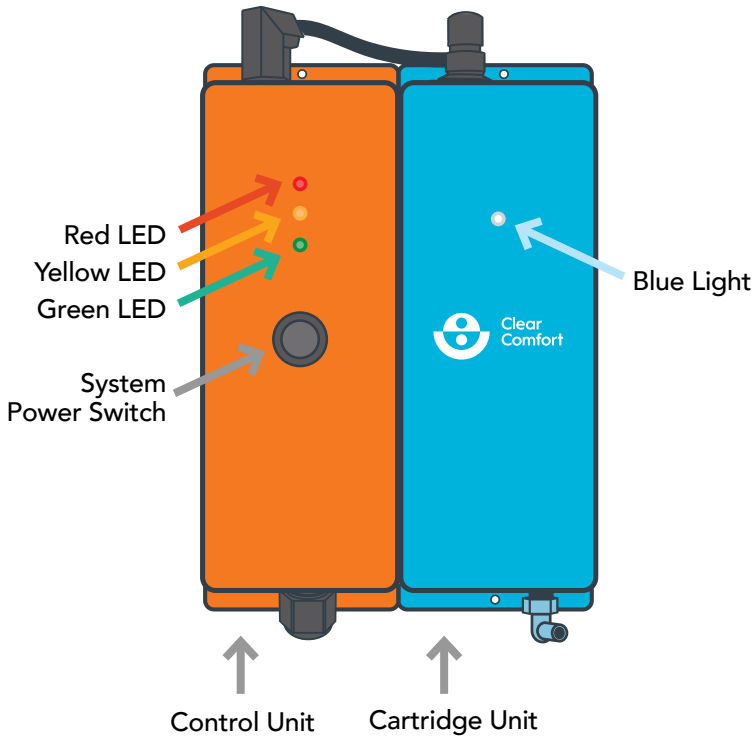
Weight:

- **CCW100 Dual:** 30 lbs.
- **CCW300/CCW300A:** 40 lbs.
- **CCW500:** 90 lbs.

OPERATING RANGES

Parameter	CCW100 Dual	CCW300A	CCW300	CCW500
Maximum Flow Rate <i>Gallons Per Minute (GPM)</i>	180 GPM	350 GPM	700 GPM	2,000 GPM
Power Includes Compressor	240 Watts	360 Watts	380 Watts	580 Watts
Current Sensor	0.25A to 15A	0.25A to 15A		0.25A to 15A
Electrical Requirements	120/240V, 60Hz	120/240V, 60Hz		120/240V, 60Hz
Electrical Rating Includes Compressor	3.6A at 120 V, 1.8A at 240V	5.0A at 120V, 2.5A at 240V		7.0A at 120V, 3.5A at 240V

NOTE: ONLY RUN CLEAR COMFORT SYSTEM WHEN PUMP IS ON.

DUAL CCW100**LIGHT FUNCTIONALITY**

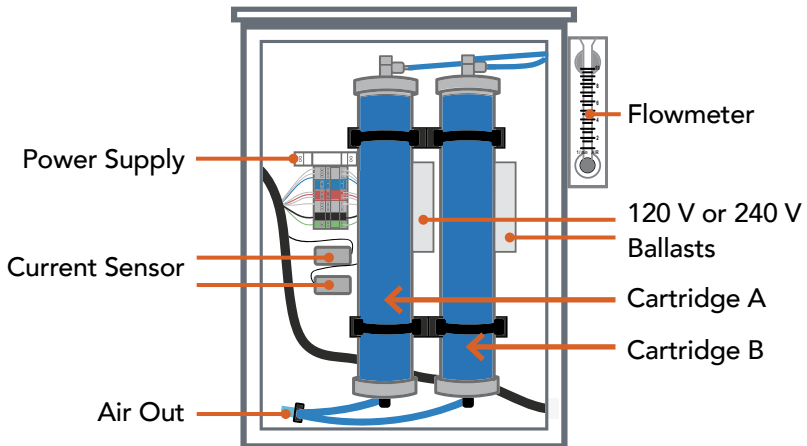
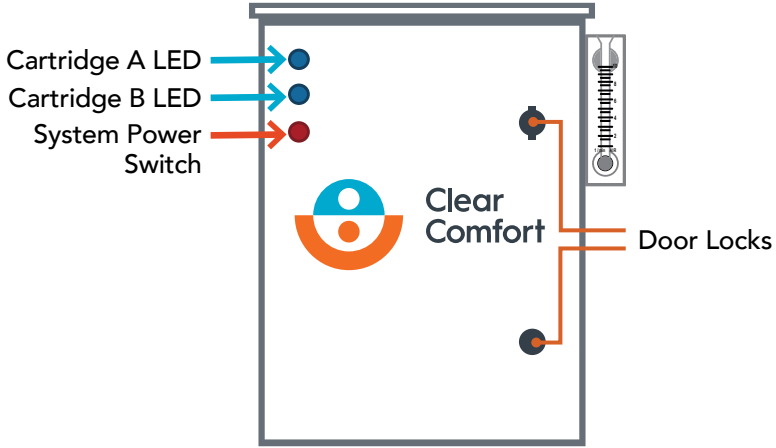
Green LED Light: System is on and operating properly.

Yellow LED Light: Cartridge Unit has reached 80 percent of its life expectancy (8,000 hours) and it's time to purchase a replacement cartridge.

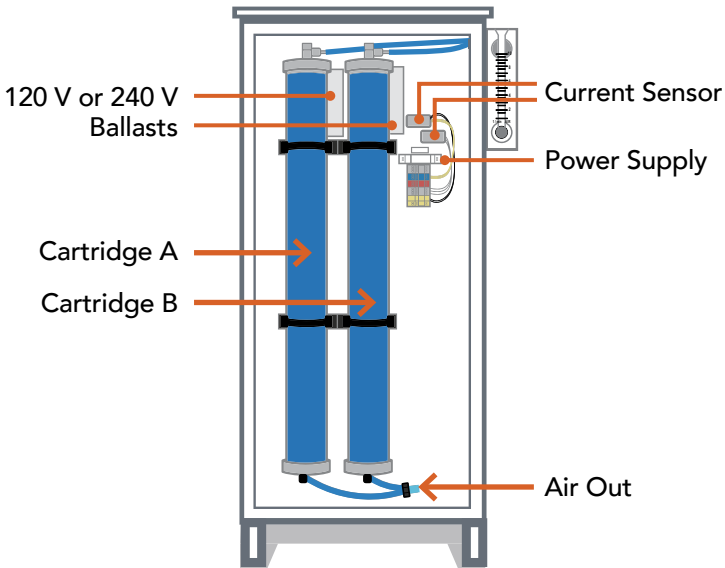
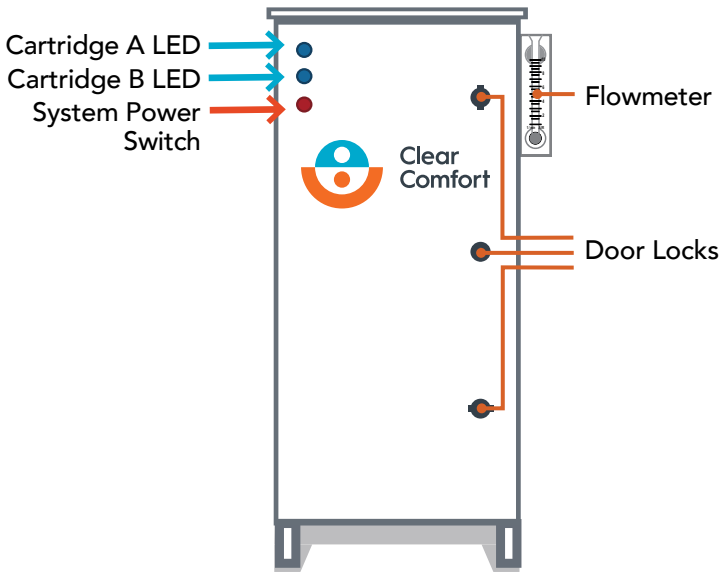
To exchange your Cartridge Unit, please visit: clearcomfort.com/cartridge

Red LED Light: Cartridge Unit has reached its life expectancy and needs to be replaced. If red LED is flashing, contact Clear Comfort support.

CCW300A & CCW300



CCW500



INSTALLATION PREREQUISITES

Before installation, site survey should be performed to validate the correct system parameters are ready. We recommend compliance with operating ranges for well-maintained and circulated pools, spas, and other water.

- **Filter Type:** Any ANSI 50 approved filtration
- **Pump Type:** Enough to supply the minimum required turnover rate
- **Power Supply Voltage:** 120/240V, see the specification label on system
- **Maximum Distance to Injection Site:** 20' for Diffuser Rod Install Kits or 30' for Surge Pit Install Kits
- **Surge Pit Setup:** Place Diffuser(s) in surge pit near water entry point and away from pump suction
- **System Rating:** NEMA 3R, install away from sprinklers facing up
- **Maximum Water Pressure:** Do not exceed 50 psi
- **Water Quality:** Normal ranges before Clear Comfort system install

RECOMMENDED MATERIALS AND TOOLS

1. Power drill
2. If needed, mounting hardware for the Clear Comfort system, e.g. bolts, screws, brackets, hangers, etc.
 - For I-beam or pole attachments, a special bracket may be needed
3. Appropriate plumbing supplies

CLEAR COMFORT SUPPLIED MATERIALS

Included with the Clear Comfort AOP system (excluding install kits):

- Clear Comfort AOP System
- 10' Power Cord
- Flow Meter

Diffuser Rod Install Kit Includes:

- Flow Switch
- Diffuser Rod(s)
- 1" NPT Tap
- 1-1/8" Hole Saw
- Air Compressor
- Air Tubing With Air Check Valve
- Junction Box

Surge Pit Diffuser Install Kit Includes:

- Diffuser Disc(s)
- Air Compressor Enclosure
- Junction Box
- Air Tubing

Diffuser Rod Install Kit (CCW100 Dual) Includes:

- CCW100 Clear Comfort AOP Systems x2
- Flowmeter x2
- Flow Switch
- Diffuser Rod(s)
- Compressor Silencer/Filter
- Air Compressor Enclosure
- Air Tubing With Air Check Valve
- Junction Box
- PVC Tees x2
- Reducer Bushings x2
- Y-Barb Fittings x2

INSTALLING THE CLEAR COMFORT SYSTEM

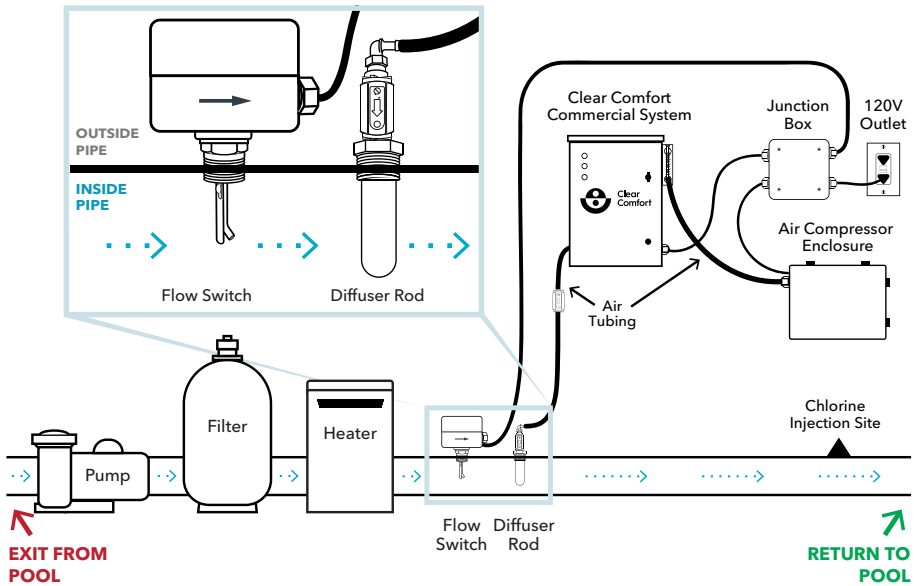
Place the Clear Comfort system near the power supply. The system power cord attached to the supplied junction box should be plugged directly into a standard 120V wall outlet. The Clear Comfort system should not operate if the pump is off or if water is not circulating. Select a location to minimize the distance between the Clear Comfort system and the diffuser injectors.

SYSTEM INSTALLATION - LOCATION

1. Determine the best location and place the Clear Comfort system.
2. Install the Clear Comfort system and mount the enclosure with suitable hardware and wall anchors for a secure attachment.
3. Place the system at or above water level of pool/spa if possible.

SYSTEM INSTALLATION - ELECTRICAL

1. The device must be properly connected to the correct power source with the supplied power cord in following with local electrical code.
2. **Direct Pump Circuit Connection:** The unit can be hardwired to the pump circuit and controlled by the pump circuit.
3. **Outlet Installation:** If the unit is being wired to standalone AC power (i.e. not through the pump circuit on either 120V or 240V) it should be installed and plugged in through a Ground Fault Circuit Interrupt (GFCI). Regardless if hardwired or standalone connected, the electrical connection must be made in accordance with the local electrical code.
4. 240V Power supply cord supplied and must be field wired in accordance to the National Electrical Code and in accordance with local regulations.
5. Test for proper grounding and secure connections.



System Flow Rates:

- CCW300A: 12 - 14 LPM
- CCW300: 23 - 28 LPM
- CCW500: 40 - 55 LPM

Flow Switch Connections:

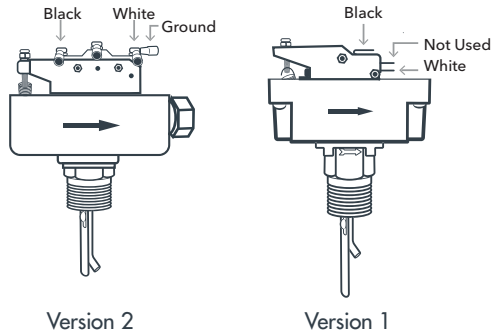


Figure 1:
Full System Diagram of the Inline Diffuser Installation Kit
With Dwyer Flow Switch

**Note: Images are not to scale.*

SYSTEM INSTALLATION INLINE DIFFUSER ROD INSTALL KIT WITH DWYER FLOW SWITCH

1. Turn the main pool pump OFF and switch the main pool circuit breaker OFF.

Please Note: One 120VAC outlet receptacle is required to power the system.

2. Locate a section of main return pipe to install the Diffuser Rod and Flow Switch. The location should be after the heater, allow the greatest distance possible from chlorine injection site, and preferably prior to the chlorine injection (see installation diagram). Diffuser must be installed after inlets to any bypass using a booster pump to avoid cavitation or loss of prime.
3. (If applicable) To isolate water from pool, close the return line valves before and after the Diffuser Rod and Flow Switch install locations.
4. Use included 1-1/8" Hole Saw to drill one hole for the Diffuser Rod and one hole for the Flow Switch.
Please Note: If preferred, a saddle tee with a 1" NPT reducer bushing can be installed in place of tapping the pipe directly.
5. Use the included 1" NPT Tap to cut threads into holes for both the Diffuser Rod and the Flow Switch.
6. Determine the correct length of flow switch paddle to use based on pipe size. When using longer paddles, it's recommended to stack shorter paddles in layers for reinforcement.
7. Using teflon tape or another preferred thread seal, install the Flow Switch in the hole that is first in line in the direction of flow, ensuring that the directional arrow is pointing in the direction of flow.
8. Thread the check valve into the Diffuser Rod.
9. Thread the assembled Diffuser Rod into the second hole in the direction of flow.
10. Mount the Clear Comfort system so that there is no more than 15' of air tubing between it and the Diffuser Rod. Minimize tube length when practical.

11. Mount the Air Compressor Enclosure near the Clear Comfort system. Connect blue Air Tubing from the Air Compressor's barb fitting to the bottom of the Clear Comfort system's flowmeter (attached to the right side of the system).
12. Insert the Clear Comfort system's power cord into the open water tight strain relief fitting on the Junction Box.
 - Connect the ground wire to the 5-lever splice connector with the other grounds.
 - Connect the white wire to the 3-lever connector with the two other white wires. Connect the black wire to the 3-lever connector with the white and black wires.
13. Secure the Junction Box cover and mount it to the wall.
14. Insert the watertight strain relief fitting that is connected to the loose cord from the Junction Box into the Flow Switch and secure with conduit locknut.
 - Connect the ground wire to the green screw ground terminal in Flow Switch.
 - Connect the black wire to the terminal (with the red dot) and the white wire to the terminal (with the yellow dot).
 - Important Note: Do not replace the Flow Switch cover at this time as adjustments to the sensitivity screw may be necessary.
15. Connect blue Air Tubing from the bottom of the Clear Comfort system's Cartridge(s) to the Diffuser Rod's barb fitting, trimming the Air Tubing to the shortest length possible.
16. Connect the power cord from the Junction Box to the 120V GFCI Power Outlet.

System Flow Rates:

- CCW300A: 12-14 LPM
- CCW300: 23-28 LPM
- CCW500: 40-55 LPM

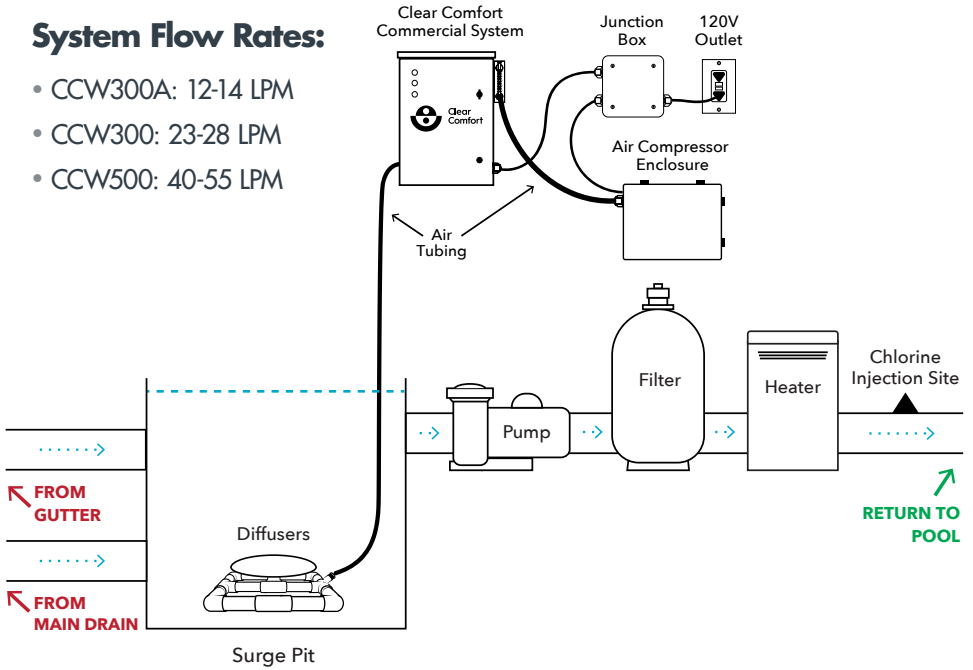
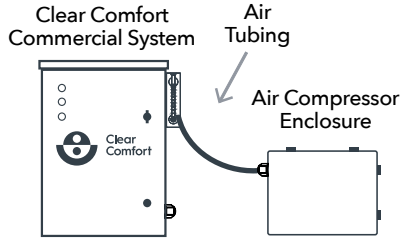


Figure 2:
Full System Diagram of the Surge Pit Diffuser Installation Kit

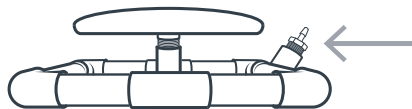
**Note: Images are not to scale.*

SYSTEM INSTALLATION SURGE PIT INSTALLATION KIT

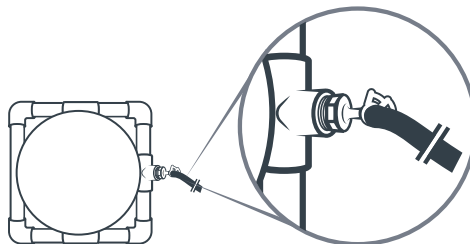
1. Mount the Clear Comfort system near the surge pit to minimize the length of blue Air Tubing.



2. Mount the Air Compressor near the Clear Comfort system. Connect blue Air Tubing from the Compressor's barb fitting to the bottom of the Clear Comfort system's flowmeter (attached to the right side of the system) and secure with hose clamps.
3. Run Air Tubing from the Clear Comfort System into the surge pit.
 - If needed, core drill through concrete door.
 - If tubing needs to cross a floor, route Air Tubing through grating or hatch and use conduit that is secured to door.
4. Connect the barb fitting(s) and Diffuser(s) to the PVC Diffuser Manifold(s). **Important: Do not overtighten** diffuser, cracking of the PVC tee may occur.

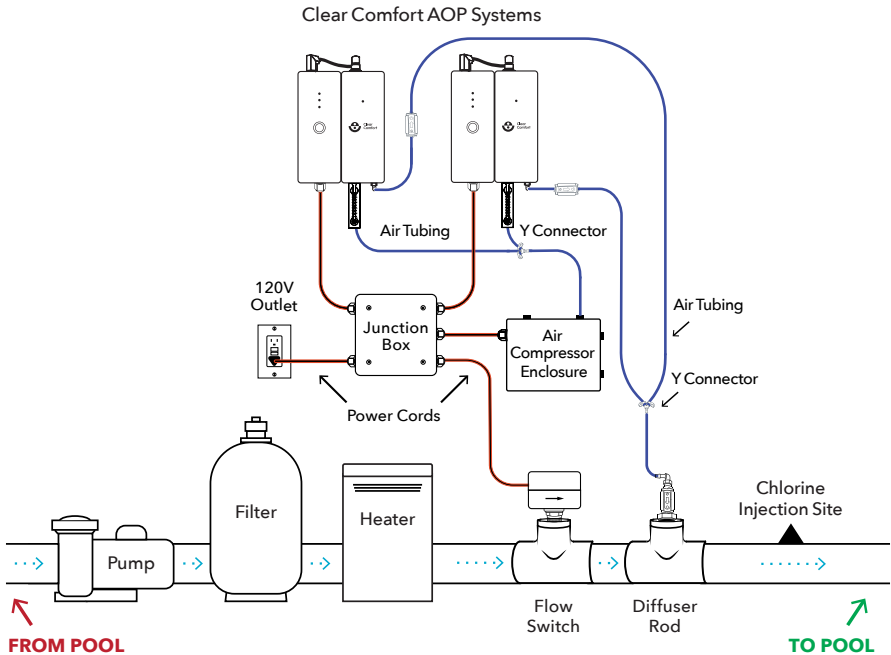


5. Connect Air Tubing to the Diffuser barb fitting(s) and secure with clamp.



6. If installing a CCW300 or CCW500 system, connect the included 1/4" splitter barb fitting to the Air Tubing at the bottom of the surge pit. Then, connect Air Tubing from the splitter to each Diffuser and secure each connection with clamps.
7. In the surge pit, position Diffuser(s) near the location that water enters the pit and away from the pump suction.
8. Mount the Junction Box on a wall. Insert the Clear Comfort system cord into the Junction Box's open watertight strain relief fitting and connect wires to the provided lever nuts: green to green, black to black and white to white.
9. Plug in the Junction Box's power cord, press the Clear Comfort system's power button ON and use the flowmeter's adjustment knob to set the flow rate.

Please Note: Not all Surge Pits are designed the same. For additional Installation questions, please use the information below to contact Clear Comfort's Customer Success Team.



Flow Switch Connections:

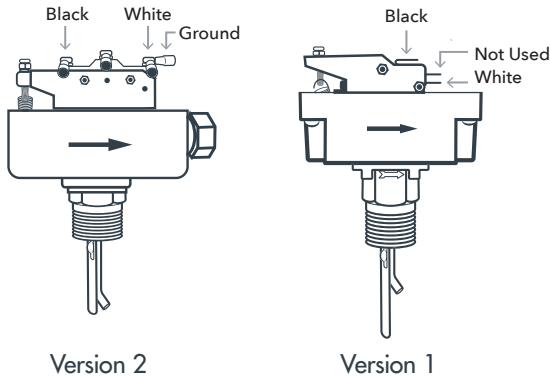


Figure 3:
Full System Diagram of the CCW100 Dual & Inline Diffuser Install Kit With Dwyer Flow Switch

**Note: Images are not to scale.*

SYSTEM INSTALLATION CCW100 DUAL & INLINE DIFFUSER

1. Turn the main pool pump OFF and the main pool circuit breaker OFF.
Please Note: To power the system, one 120-VAC outlet receptacle is required.
2. Locate a section of main return pipe to install the Diffuser Rod and Flow Switch. The location should be after the heater, preferably prior to the chlorine injection, allow for the most distance possible from the chlorine injection site and after inlets to any bypass using a booster pump (to avoid cavitation or loss of prime).
3. (If applicable) To isolate water from the pool, close the return line valves before and after the Diffuser Rod and Flow Switch install locations.
4. Install tees for the Diffuser Rod and Flow Switch.
5. Affix the appropriate length paddle to the Flow Switch's lever arm, so the paddle extends into the pipe's main flow without touching the inner tee wall.
6. Using Teflon tape or another preferred thread seal, install the Flow Switch in the hole that's first in the inline flow direction. Ensure the Flow Switch's arrow points to the flow direction.
7. Thread barb fitting and Check Valve into Diffuser Rod.
8. Thread the assembled Diffuser Rod into the second hole in the direction of flow.
9. Mount the Clear Comfort AOP systems side-by-side on a wall with minimal length of tubing (15' max.) possible between them and the Diffuser Rod.
10. On the bottom of Clear Comfort AOP system's Cartridge, thread the Flowmeters into the stainless steel elbow fittings & install barb fitting into Flowmeter's bottom NPT threaded fitting.
11. On the wall near the Clear Comfort AOP systems, mount the Air Compressor on the enclosure unit or mounting plate.
12. Thread the included Filter/Silencer into the Air Compressor's open intake port.

13. On the Air Compressor's barb fitting, connect a short length of blue Air Tubing to one of the "Y" Barb Fittings. On the "Y" Barb Fittings, connect two more short lengths of blue Air Tubing to the Clear Comfort AOP system's Flowmeter bottom barbs.
14. On the bottom of each Cartridge's available barb fitting, connect two more short lengths of blue Air Tubing to the remaining "Y" fitting. On the "Y" fitting, connect another Air Tubing to the Diffuser Rod.
15. Wall mount the Junction Box below the AOP systems.
16. For each AOP system, secure power wires to the Junction Box and secure with conduits.
17. Inside the Junction Box, connect the ground wire to the 5-lever splice connector with the other grounds.
18. Connect the CCW100 AOP system red wires to the 5-lever connector with two white wires from the compressor and power in. Connect the CCW100 black wires to the 5-lever connector with white and black wires.
19. On the Junction Box, insert the watertight strain relief fitting that's connected to the loose cord into the Flow Switch and secure with conduit locknut.
 - Connect the ground wire to the ground terminal.
 - Connect hot and common wires to terminals for a normally open circuit
20. Connect the power cord from the Junction Box to the 120V GFCI Power Outlet.
21. If the Clear Comfort AOP systems do not turn ON when flow is restored, adjust the Flow Switch sensitivity by removing its gray cover and turning the brass adjustment screw counterclockwise until the AOP systems remain ON while water circulates.
22. On each Cartridge Flowmeter, use knobs to adjust air flow rate to 5 LPM.

OPERATING INSTRUCTIONS

1. Adjust pool pH, Cyanuric Acid, Alkalinity, and Calcium Hardness to correct operating levels in order to maintain a properly balanced water saturation index.
2. Open valve isolating the diffuser injection site from main pool/spa water (if applicable)
3. Turn pool/spa pump and filtration systems on. Ensure proper function and note/fix any leaks that may have occurred during installation
4. Ensure airflow rate meets followin ranges with the system Flowmeter:

	CCW100 Dual	CCW300A	CCW300	CCW500
Minimum Airflow Rate <i>Liters Per Minute (LPM)</i>	10 LPM	12 LPM	23 LPM	40 LPM
Maximum Airflow Rate <i>Liters Per Minute (LPM)</i>	12 LPM	14 LPM	28 LPM	55 LPM

5. Close the front door of the Clear Comfort system, turn latch lock to the closed position, and toggle red power button to the ON position. LED will illuminate.
6. The blue LEDs will also illuminate indicating that each cartridge is operating properly.
7. At this point, the Clear Comfort system should be functioning, and thus applying treated air to the recirculating water via the diffuser injector.
8. Check for bubbles in pool return jets — the water entering the pool/ spa will inject thousands of entrained bubbles.

SYSTEM MAINTENANCE

**HOW TO EXCHANGE YOUR CARTRIDGE:
CCW300A, CCW300 & CCW500**

To keep the Clear Comfort system working its best, the Cartridge(s) must be exchanged annually. No other system maintenance is required.

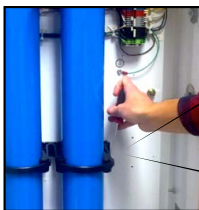
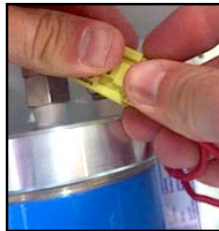
Do NOT service if system is wet.

Start a Cartridge order at: clearcomfort.com/cartridge



IMPORTANT NOTE: For proper recycling, please return your old Cartridge with the provided label and packaging.

1. Turn OFF power to Clear Comfort system with the red power button.
2. Turn OFF and unplug power to the system from its power source.
3. Disconnect ¼" blue air tubing connections to Cartridge(s).
4. Disconnect the yellow electrical power connections.



5. With a small flathead screwdriver, gently release the black bracket arms.
6. Firmly remove the old Cartridge(s) from the black bracket housing.
7. Insert new Cartridge(s), ensuring they're properly seated in brackets.
8. Secure black bracket arms around Cartridge(s) until they click securely.
9. Reconnect blue air tubing to Cartridge(s), ensuring a secure fit.



10. Close the system's front door, lock the latch, and use the red button to turn the system ON. The system's LEDs will illuminate when it is on.
11. For sustainability purposes, return your old Cartridge with the shipping label and packaging that was provided with your new Cartridge.

SYSTEM MAINTENANCE: CARTRIDGE EXCHANGE

HOW TO EXCHANGE YOUR CARTRIDGE: CCW100 DUAL



To keep the Clear Comfort system working its best, the Cartridge Unit must be exchanged annually. No other system maintenance is required.

If the **Yellow LED Light** is ON, your Cartridge will expire soon and it's time to order a new replacement Cartridge. **NOTE:** Your new Cartridge includes a shipping label and packaging to return your old Cartridge to Clear Comfort for proper recycling.

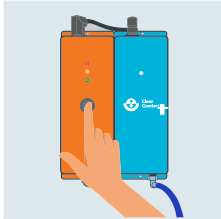
Cartridge to Clear Comfort for proper recycling.

If the **Red LED Light** is ON, your Cartridge has expired & must be exchanged immediately to protect your water.

Start a Cartridge order at: clearcomfort.com/cartridge



IMPORTANT NOTE: For proper recycling, please return your old Cartridge with the provided label and packaging.

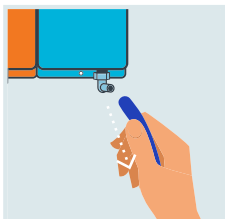


1. Turn off and disconnect power to Clear Comfort system.

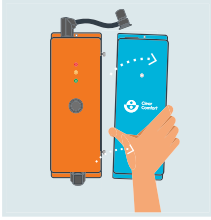
NOTE: Never attempt to service unit while it is wet. Ensure all LEDs on system front are OFF.



2. To disconnect Cartridge Unit from Control Unit, rotate the cable base on top of the blue Cartridge Unit a quarter turn and gently pull up.

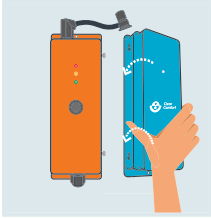


3. Remove the Air Tubing from bottom of Cartridge Unit.

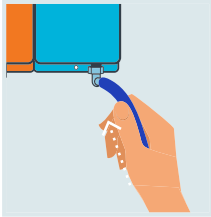


4. Push the old blue Cartridge Unit up and separate it from the Control Unit.

IMPORTANT: Save and use the return label and packaging provided with your new Cartridge Unit to send your old Cartridge to Clear Comfort for proper recycling.



5. To attach the new Cartridge Unit, align the side keyed brackets and push down.



6. Reconnect the Air Tubing to bottom of the Cartridge Unit.

7. Remove Flowmeter from the old Cartridge and reinstall on the new Cartridge. See page 25 for details.

Need a Flowmeter? To order, please visit: clearcomfort.com/accessories



8. Align the Control Unit's cable base slot to the Cartridge Unit's top connector slot, gently push down and rotate a quarter turn. See Figure 3 for details.



9. Reconnect the system's power and turn it on.

NOTE: For proper light functionality, please see page 8. If strange light pattern occurs, follow the instructions on page 10.



10. For sustainability purposes, return your old Cartridge with the shipping label and packaging that was provided with your new replacement Cartridge.

HOW TO CLEAN DIFFUSER RODS

1. Turn off your circulation pump. If necessary, isolate the valves on either side of your Diffuser injection point.
2. Disconnect Air Tubing & remove your Diffuser Rod from the pipe. **Note:** Normal iron oxide and other mineral fouling.
3. Soak Diffuser Rod in undiluted muriatic acid for 5 to 10 minutes.
4. Reinstall Diffuser Rod, open any isolated valves on either side of your Diffuser injection point, and turn on circulation pump.



HOW TO CLEAN SURGE PIT DIFFUSER DISCS

1. Turn off and disconnect power to the Clear Comfort system. Remove diffuser discs from surge pit.
2. Fill a container, like a dish or bucket, with 1 inch of muriatic acid. **Note:** Normal iron oxide and other mineral fouling.
3. Submerge disc upside down in undiluted muriatic acid & let soak for 5 to 10 minutes.
4. Remove diffuser disc from acid & reinstall into surge pit. Reconnect the system's power & turn it on.



COMPRESSOR MAINTENANCE

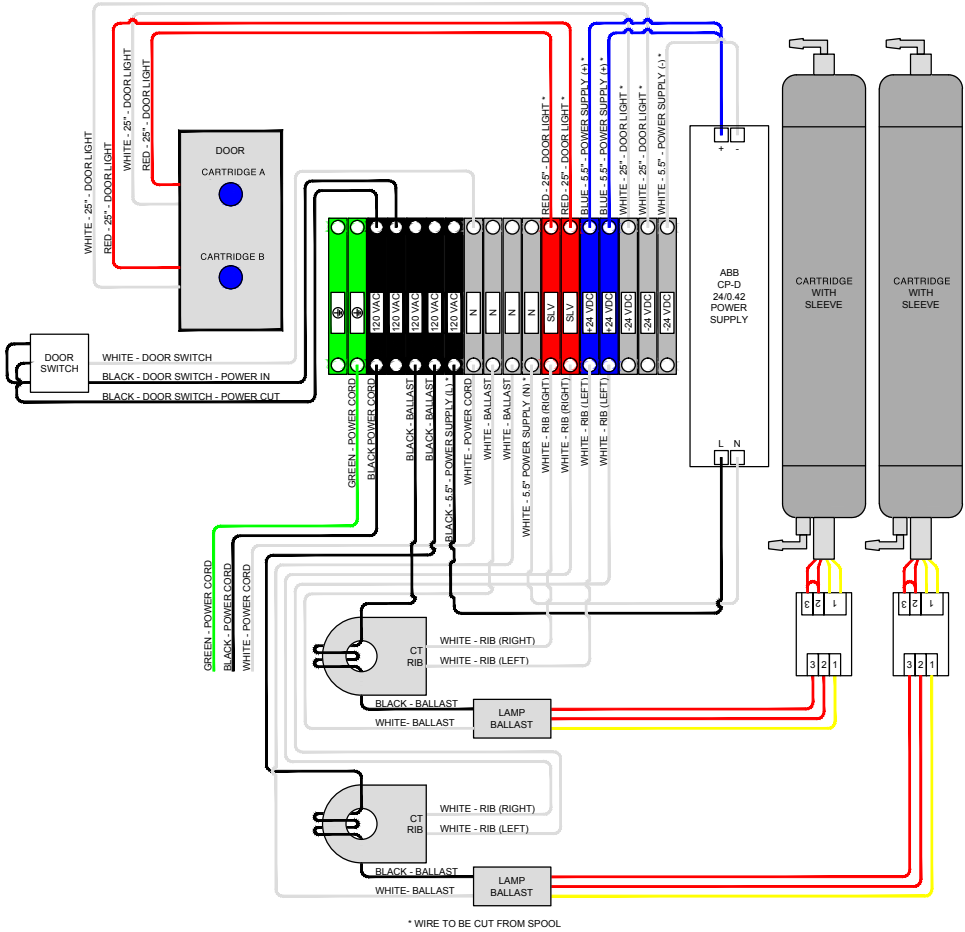
To ensure longevity of your Compressor, a rebuild kit is available for easy internal component maintenance, needing basic tools and expertise.

For details, please contact Clear Comfort Customer Success.

COMPRESSOR ENCLOSURE

For optimal performance, periodically replace ompressor enclosure vent filters based on installation area conditions.

WIRING DIAGRAM



This electrical connection must be made in accordance with the local electrical code.

WIRING INTO PUMP ELECTRICAL CIRCUIT

The device must be properly connected to the correct power source (either 60Hz, 120Vac or 240Vac) using the supplied power cord in accordance with the local electrical code. The unit should be hardwired to the pump circuit and controlled by the pump circuit.

WIRING TO A STANDALONE ELECTRICAL OUTLET

(Preferred Method)

The unit should be plugged into a 120VAC Ground Fault Circuit Interrupt (GFCI) outlet. The integrated system flow switch will interlock the Clear Comfort system and compressor with the flow of water so that the unit will not operate while the circulation pump is off.

240 Volt power supply cord supplied and must be field wired in accordance to the NEC (ONLY FOR 240V).

If you have questions about this operational mode, please contact Clear Comfort Customer Success at:

- clearcomfort.com/help
- support@clearcomfort.com
- 303.872.4477



We're here to help

Have questions? For assistance, contact us:

☎ 303.872.4477

✉ support@clearcomfort.com

🌐 clearcomfort.com/help

For the latest manual version, scan the QR code or visit:
clearcomfort.com/commercial-manual

