

PRODUCT MANUAL

Q-C-20/50

Q-CS-20/50

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PRODUCT MANUAL

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SAFETY

The unit should be isolated from the electricity supply before removal of any panels.

INTRODUCTION

The Q-C and Q-CS units are direct chill cooler systems designed to provide chilled water by passing water through a stainless steel water coil in the “cold block”. Additionally Q-CS units are designed to provide chilled carbonated water.

SPECIFICATION

- See tables below and opposite for the the models-
- Q-C-20
 - Q-CS-20
 - Q-C-50
 - Q-CS-50

Q-C20			
Dimensions	240mm (W)	Compressor	Cubigel B30G
	350mm (D)		
	385mm (H)		
Supply	220-240Vac 50Hz	This product contains fluorinated greenhouse gas with a GWP of 1430 in an hermetically sealed system	
Rated Input	200W		
Rated Current	1.2A	Refrigerant	R134a, 0.075kg
Fuse Rating	5A	CO2	0.107t
Compliance	 	Climatic Class	N

Q-CS20			
Dimensions	240mm (W)	Compressor	Cubigel B38G
	350mm (D)		
	385mm (H)		
Supply	220-240Vac 50Hz	This product contains fluorinated greenhouse gas with a GWP of 1430 in an hermetically sealed system	
Rated Input	200W		
Rated Current	1.2A	Refrigerant	R134a, 0.1kg
Fuse Rating	5A	CO2	0.143t
Compliance	 	Climatic Class	N

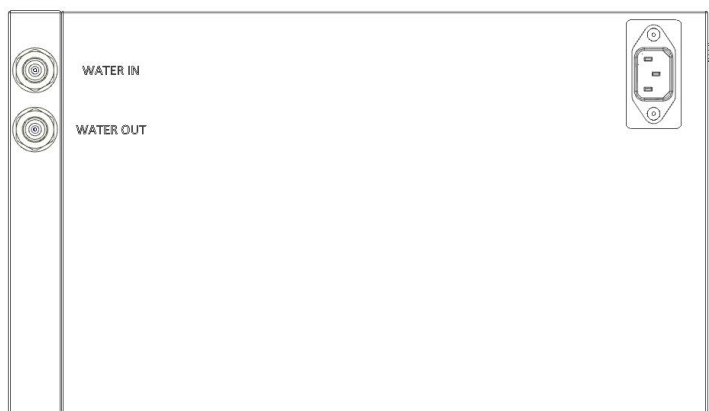
Q-C50			
Dimensions	240mm (W)	Compressor	Tecumseh THB4422Y
	478mm (D)		
	385mm (H)		
Supply	220-240Vac 50Hz	This product contains fluorinated greenhouse gas with a GWP of 1430 in an hermetically sealed system	
Rated Input	300W		
Rated Current	1.9A	Refrigerant	R134a, 0.130kg
Fuse Rating	5A	CO2	0.186t
Compliance	 	Climatic Class	N

Q-CS50			
Dimensions	240mm (W)	Compressor	Tecumseh THB4422Y
	478mm (D)		
	385mm (H)		
Supply	220-240Vac 50Hz	This product contains fluorinated greenhouse gas with a GWP of 1430 in an hermetically sealed system	
Rated Input	323W		
Rated Current	2A	Refrigerant	R134a, 0.130kg
Fuse Rating	5A	CO2	0.186t
Compliance	 	Climatic Class	N

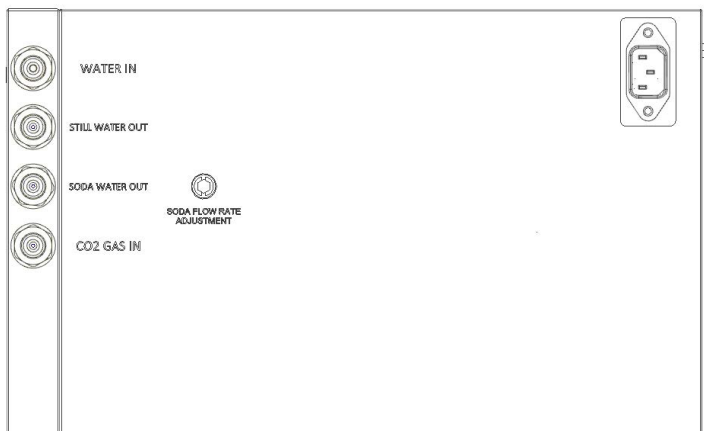
INSTALLATION AND COMMISSIONING

Locate the machine in a suitable enclosure, ensuring that there is suitable ventilation. Care must be taken to ensure that hot air from the exhaust vent is not recirculated into the air intake. This will have an adverse effect on performance and will reduce fridge life. During operation air is drawn into the unit through the ventilation openings in the base (and unit sides for the Q-C20) and then exhausted through the ventilation openings to the rear of the unit.

MODEL: Q-C-20 / Q-C-50



MODEL: Q-CS-20 / Q-CS-50



MODEL: Q-C-20 / Q-C-50

NOTE: At this stage do not connect the unit to the electrical supply.

- Using 1/4" PE pipe, connect the 'Water Out' port, found on the front right of the chiller, to the inlet on the Quatreau system. This is located on the left side of the system as you look at it.
- Connect the 'Water In' port of the chiller to the H2O port of the Quatreau system.
- Check that the interconnection to the Quatreau tap is fixed in place then dispense water from the Quatreau tap to purge air from the chiller.
- Once all air has been purged from the system, connect the unit to the electrical supply and turn on. The compressor and fan will start
- After approximately 5-10 minutes, the compressor and fan will stop as the chiller has reached its normal operating temperature.

NOTE: The time taken for the chiller to reach operating temperature will vary depending on ambient temperature, humidity and the temperature of the incoming water supply.

MODEL: Q-CS-20 / Q-CS-50

NOTE: At this stage do not connect the unit to the electrical supply.

- Connect the 'Water In' port of the chiller to the "H2O OUT" port of the Quatreau Boiler system.
- Connect the Co2 Cannister (Set at 40-45 psi – 3 Bar).
- Turn water on.
- Using the Quatreau Tap, activate the chilled water function until all the air has been purged from the system and a clean flow of water is observed.
- Power system on and **then Immediately Select and then Deselect the Sparkling Function**. This will allow the pump to receive the water it needs.
- Once the pump has finished running 10-20 Seconds, power down the Chiller Unit.
- Purge Co2 Water through the tap for 10 Seconds by selecting the Sparkling Function.
- Power system on again and then **Immediately Select and then Deselect the Sparkling Function**. This will allow the pump to receive the water it needs.
- After approximately 10 minutes, the compressor and fan will stop as the chiller has reached its normal operating temperature.
- The Chiller carbonator Unit is commissioned.

SODA FLOW RATE ADJUSTMENT & UNIT CLEANING

The Soda flow rate is factory set to dispense at 30 ml per second at a gas pressure of 2.7BarG. However, if an alternative flow rate is required follow the steps below:

1. Locate the flow adjuster screw on the side of the unit.
2. To increase the flow rate turn the screw anti-clockwise.
3. To reduce flow rate turn the screw clockwise.
4. Adjustments can be made with either a large flat head screw driver or with a 6mm Alan Key.
5. It is recommended to make incremental changes of no more than a 1/8th of a turn at a time until desired flow rate is achieved.

GENERAL CLEANING – OUTER CASING

Important: It is recommended that the procedure should be performed at least every 6 months.

Condenser

At regular intervals, determined by local environmental conditions, the condenser should be thoroughly cleaned with a small stiff brush and/or a vacuum cleaner. Do not use screwdrivers or other sharp implements which may puncture the tubes and damage the fins.

Warning: Failure to clean the condenser can shorten the life of the compressor causing premature failure of the unit.

Outer Panels

Clean the outside panels, pay particular attention to the edges of the panels

where spillage could have ingressed and the area around the base of the unit. If necessary, remove the unit and thoroughly clean around the base and floor.

Sanitisation

Important: It is recommended that the procedure is performed during initial installation and at least every year at time of service.

PREPARE THE UNIT

For this procedure you will need a Pureh2o3 sterilisation system from The Pureh2o Company.

1. Disconnect the power supply to the chiller unit.
2. Isolate the water inlet to the chiller unit, disconnect and insert into the 'feed in' port on the Pureh2o3 sterilisation system.
3. Connect the outlet of the Pureh2o3 system back into the chiller.

To sterilize the internal pipe work.

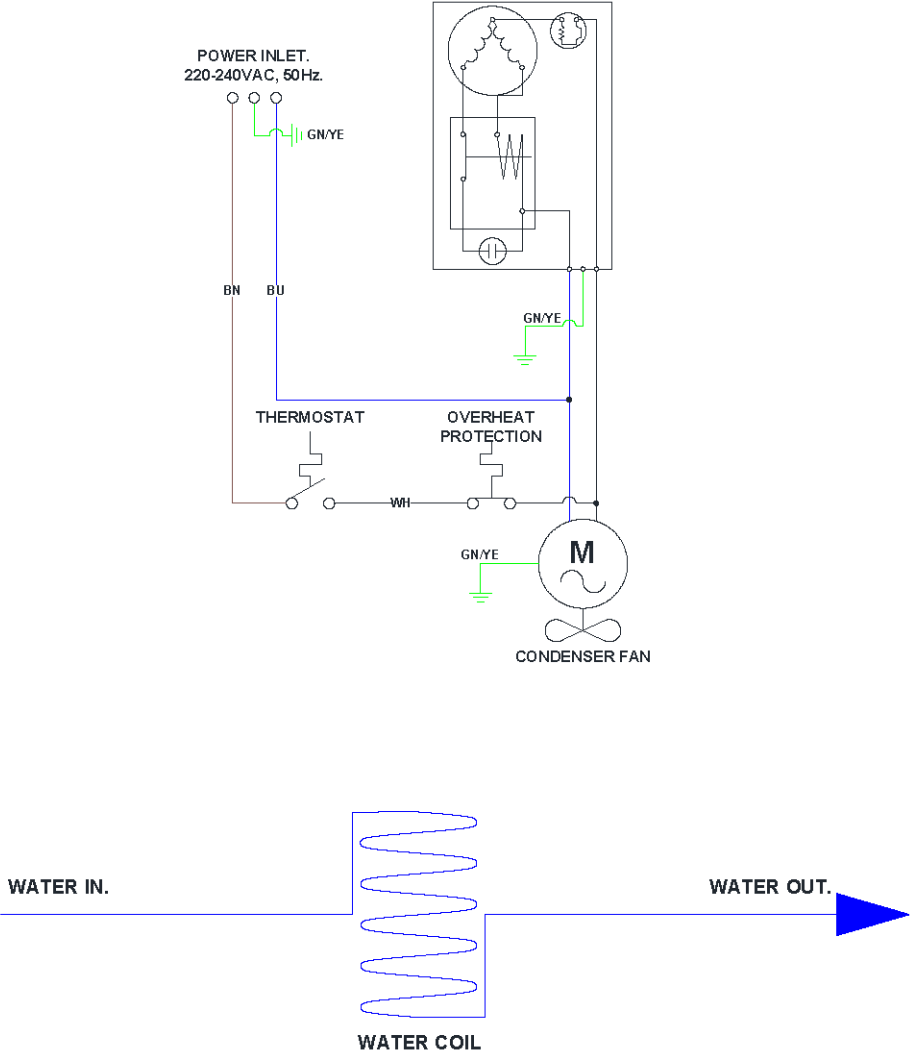
1. Activate the chilled water flow at the tap.
2. Apply power to the Pureh2o3 system.
3. Allow chilled water to flow for 30 seconds.
4. Stop the chilled water flow.
5. Immediately disconnect the power to the Pureh2o3 system.
6. Wait for 5 minutes then repeat the process.

The O3 (ozone) emitted in this procedure will effectively sterilise the internal pipe work without the need for chemicals.

Recommission the Unit

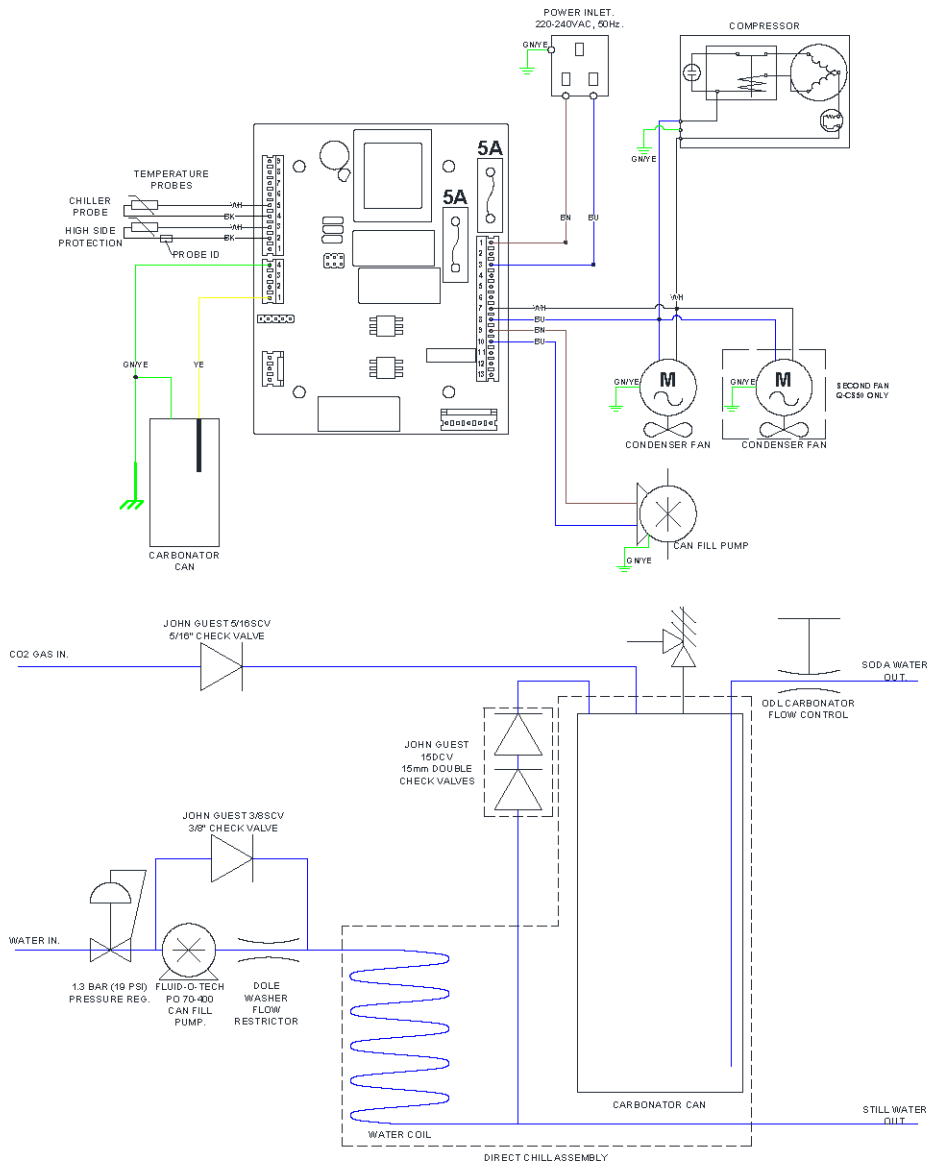
Reverse steps 1 – 3, and allow the unit to complete a cooling cycle.

MODEL Q-C-20/50
ELECTRICAL & WATER CIRCUITS



MODEL Q-CS-20/50

ELECTRICAL & WATER CIRCUITS



FAULT FINDING

Prior to any fault finding, please ensure all water connections to the chiller are sound and that the incoming water is turned on. Also ensure that all electrical connections to the chiller and in the chiller are secure and in good condition, and that the power is on.

If the above are satisfied, ensure that the chiller has had adequate time to reach operating temperature.

NOTE: When checking electrical connections ensure the unit is disconnected from the mains power supply.

MODEL Q-C-20/50

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
No water dispensing	Frozen block	Thermostat capillary not fully inserted into chiller block. Replace if necessary.
		Thermostat out of calibration or faulty. Replace if necessary
Warm Drinks	Insufficient air flow through the fridge.	Check that the condenser and air inlet are not blocked or obstructed.
		Check supply to the cooling fan. If supply present replace fan.
		If supply not present move on to the compressor. (The supply to the fan and the compressor are linked).
	Compressor not running	Thermostat out of calibration or faulty. Replace if necessary.
	Fridge failure	If compressor & fan are running and there is no cooling, return for repair.try.
Poor quality carbonation	Incorrect CO2 pressure	Check CO2 bottle, regulator and non-. return. Supply pressure should be 40psi (2.7 bar),adjust or replace as necessary.

MODEL Q-CS-20/50

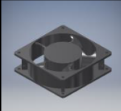
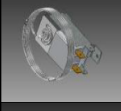
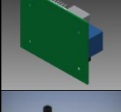
SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
No water dispensing	Frozen block	Temperature probe not fully inserted into chiller block.
		Temperature probe out of calibration or faulty. Replace if necessary.
		PCB Faulty. Replace if necessary.
No carbonated water	No CO2 pressure, check by operating pressure relief valve on carbonator can	Check CO2 bottle, regulator and non-return valve. Supply pressure should be 40psi (2.7bar), adjust or replace as necessary.
	Carbonator Can not filling	Check carbonator probe for possible short circuit to ground.
		Check for pump timeout, cycle power off & on then purge carbonator.
		Check supply to water pump (230V AC), if voltage present & pump inoperative - replace pump.
Poor quality carbonation		If voltage not present & pump is not timed out, check control board fuses. If necessary replace control board.
	Incorrect CO2 pressure	Check CO2 bottle, regulator and non-. return. Supply pressure should be 40psi (2.7 bar),adjust or replace as necessary.
	Air in carbonator can	Isolate the power supply and operate the carb water tap until gas is expelled. Allow. gas to expel for 5 seconds. Switch on power supply and allow the can to refill.

MODEL Q-CS-20/50

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Poor quality carbonation	Residue in carbonator can	After prolonged use, a surface film can develop within the carbonator can. This can be removed by flushing the system using a solution of citric acid.
	Carbonator can is overfilled	If pump runs continuously, check connections to can level probe, if problem persists replace the PCB.
Warm drinks	Insufficient cooling air flow through the fridge	Check that the condenser is not blocked. Check supply to cooling fans (230V AC). If supply present replace fans. If supply not present move on to the compressor. The supply to the fans and the compressor are linked.
	Compressor not running	Fridge overheat. Switch off the unit and allow to cool and ensure the condenser is not blocked, the cooling fan is working and there is sufficient ventilation. If overheating persists return for repair. If no overheat is found check voltage to compressor (230V AC). If voltage not present check the temperature probes and replace if required. If voltage not present check control board fuses. If necessary replace control board.
	Control not operating	Check control board and main plug fuses. If necessary replace control board.
	Fridge failure	If compressor & fan are running and there is no coling, return for repair.

SPARE PARTS

MODEL Q-CS-20/50 AND Q-CS-20/50

Part Number		Description	Q-C20	Q-CS20	Q-C50	Q-CS50
1B5514		Condenser Fan	✓	✓	✓	✓
1A5581		Temperature Probe Assembly		✓		
1A5954		Temperature Probe Assembly				✓
1A4852		Thermostat	✓		✓	
3B3963		High Side Protection	✓		✓	
1A5968		PCB - Programmed		✓		✓
1A6582		1.3 BAR Regulator		✓		✓
3B3146		Dole Washer 1.9GPM		✓		✓
3B2323		Dole Washer Housing		✓		✓

REMOVAL, TRANSPORTATION & DISPOSAL

Important: Before removal from the installation, ensure all electrical, product and gas connections are disconnected.

DISPOSAL OF SCRAP UNITS

It is illegal to simply scrap a refrigeration unit. Before a unit can be scrapped it must first have the gas removed by a specialist using special equipment. Please contact Pure H2O, who will be happy to provide a quotation for disposal.

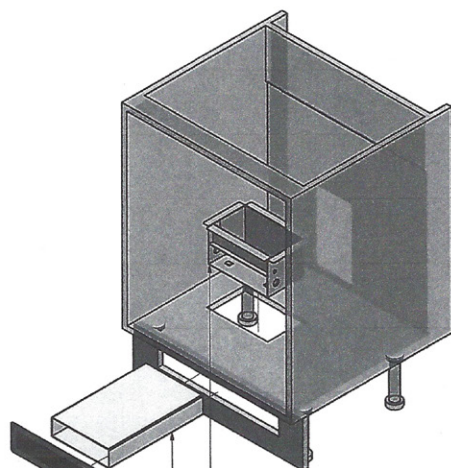
TRANSPORTATION

Important: This unit must be transported in an upright position.

As with all refrigeration systems, irreparable damage can be caused by laying the unit on its side or even transporting upside down. Where the unit is transported by a carrier, the carton should always be marked in a conspicuous manner, the correct upright position in which it must be handled.

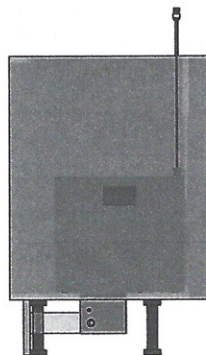
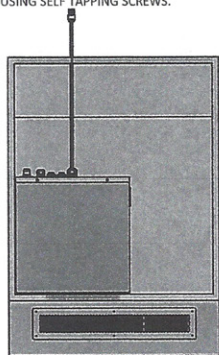
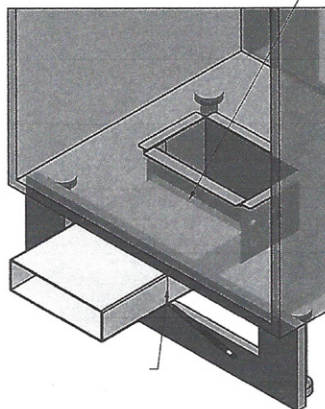
If a unit has been transported incorrectly it should be placed in the correct upright position and left for 24 hours before attempting to run the system. Failure to observe the above precautions could seriously damage the system, and would void any warranty.

VENTILATION KIT INSTALLATION



- THE SUPPLIED DUCTING BOX SHOULD BE PLACED INTO THE CUTOUT IN THE BASE OF THE CABINET. THE BOX DOES NOT REQUIRE ANY ADDITIONAL FIXINGS.
- THE AIR DUCTING IS SUPPLIED TO A LENGTH OF 330mm. THIS MAY REQUIRE CUTTING TO LENGTH TO SUIT INDIVIDUAL INSTALLATIONS.
- THE KICK PLATE SHOULD BE PLACED CENTRALLY OVER THE KICK BOARD CUT OUT AND SECURED USING SELF TAPPING SCREWS.

THE DUCTING SLOTS INTO THE OPENING OF THE DUCTING BOX. INSERT THE DUCTING UNTIL IT REACHES ITS LIMIT STOPS



THE CS50 CHILLER/CARBONATOR UNIT MUST BE PLACED TO THE LEFT AND REAR MOST POSITION INSIDE THE CABINET TO ENSURE THE VENTILATION OPENINGS ARE IN LINE WITH THE OPENINGS CUT INTO THE CABINET. AFTER INSTALLATION THE VENTS AT THE FRONT AND REAR MUST NOT BE OBSTRUCTED. ANY OBSTRUCTIONS WILL ADVERSELY AFFECT THE AIR-FLOW TO THE UNIT CAUSING A POTENTIAL FOR POOR PERFORMANCE, OVER HEATING OR FRIDGE FAILURE.

EC DECLARATION OF CONFORMITY

Model Number:

CS50

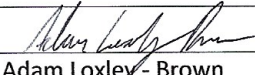


Directives compiled with for CE Compliance:

89/336/EEC EMC Directive
72/23/EEC Low Voltage Directive
97/23/EC Pressure Equipment Directive
2002/95/EC RoHS Directive
1002/96/EC WEEE Directive

Standards Used:

EN 60335-1 :2002 : Household and similar electrical appliances – Safety Part 1
General requirements
EN 50081/1 : Electromagnetic Compatibility (Emissions) General Emissions
Requirements

Signature	
Print Name	Adam Loxley - Brown
Position	Production Manager
Date	17 th April 2018

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Q-C-20/50 & Q-CS-20/50 0619

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