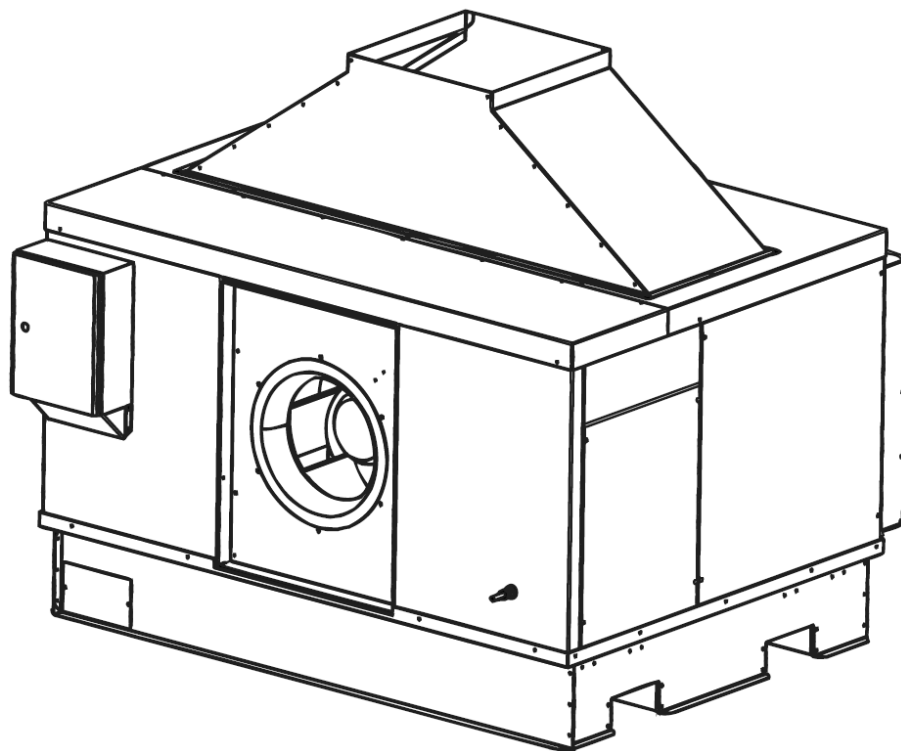


CLIMATEWIZARD

INSTALLATION
OPERATION
MAINTENANCE

CW-H10
CW-H15

Indirect Evaporative Air Cooler



- **STAND ALONE COOLING** - *Climate Wizard is the primary source of Air Conditioning for the building.*
- **SUPPLEMENTARY COOLING** - *Climate Wizard is used to augment the capacity of the existing air conditioning system, or to extend its reach into the building, or to greatly reduce the energy consumption of the Air Conditioning plant.*
- **COLD FRONT COOLING** - *Climate Wizard is used to pre-cool the fresh air supply to new or existing refrigerated air conditioning plants.*

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DESCRIPTION

- AIR FILTER ASSEMBLY (Standard, supplied with Climate Wizard)
- ELECTRONICS BOX
- INLET SAFETY GRILLE ASSEMBLY (Optional, mandatory if Inlet Filter not used)
- INLET TRANSITION ASSEMBLY
- WATER MANAGER COMPONENTS
- FAN ASSEMBLY
- TANK & CORE ASSEMBLY
- SPREADER ASSEMBLY
- OUTLET TRANSITION ASSEMBLY
- DAMPER ASSEMBLY
- OUTER PANELS (RH SIDE)
- OUTER PANELS (LH SIDE)
- EXHAUST TRANSITION ASSEMBLY
- BASE FRAME ASSEMBLY

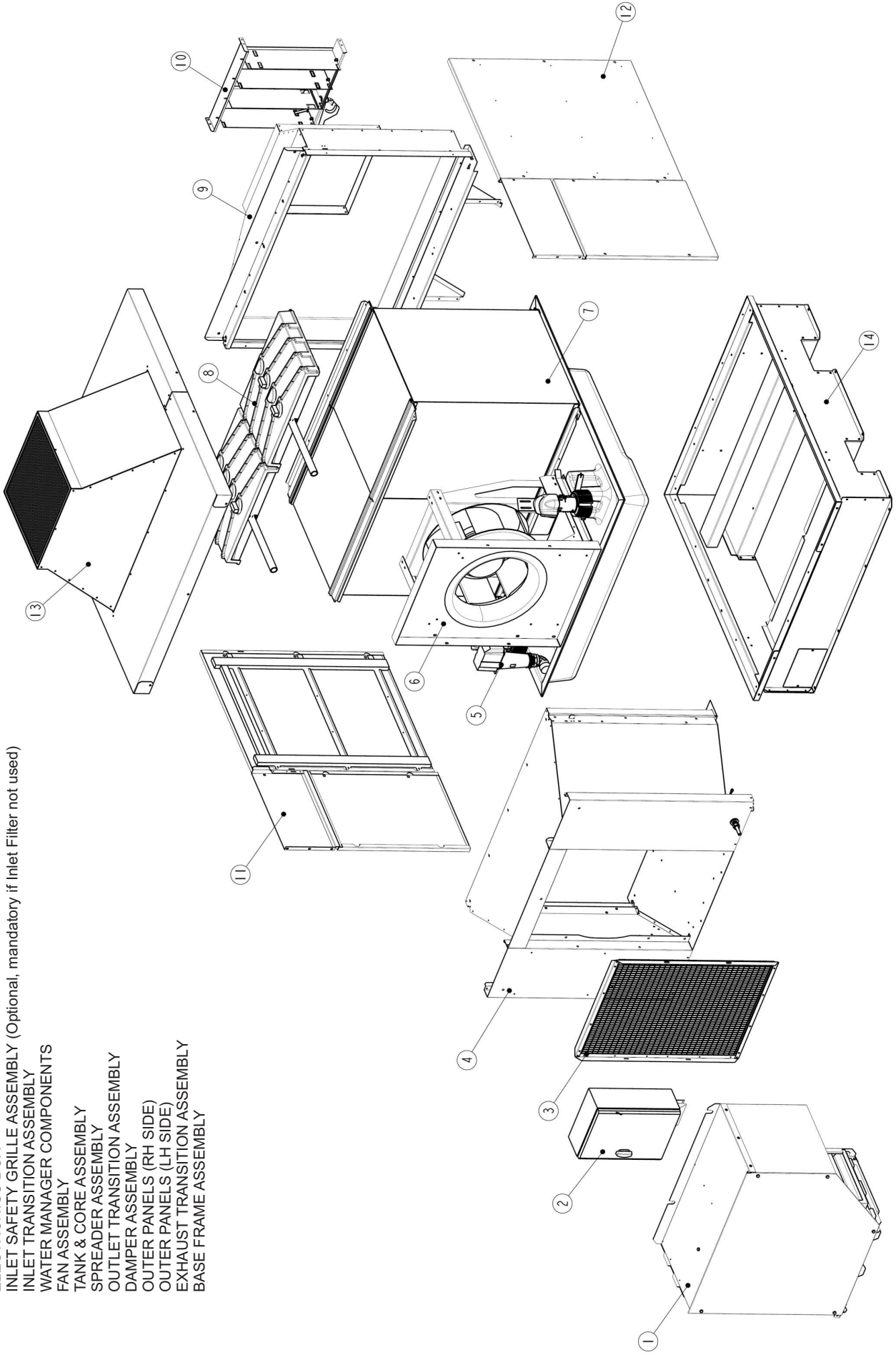


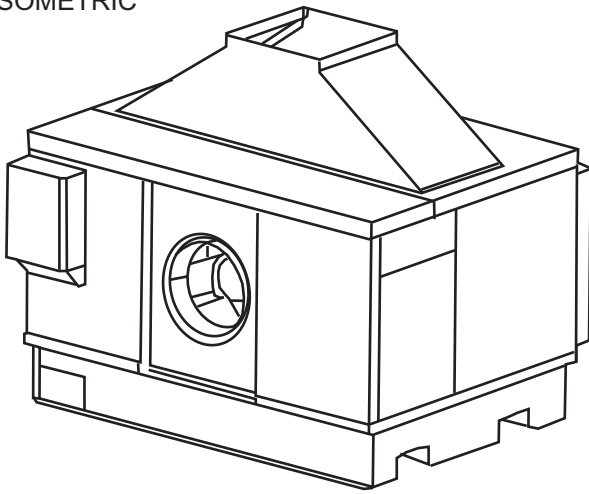
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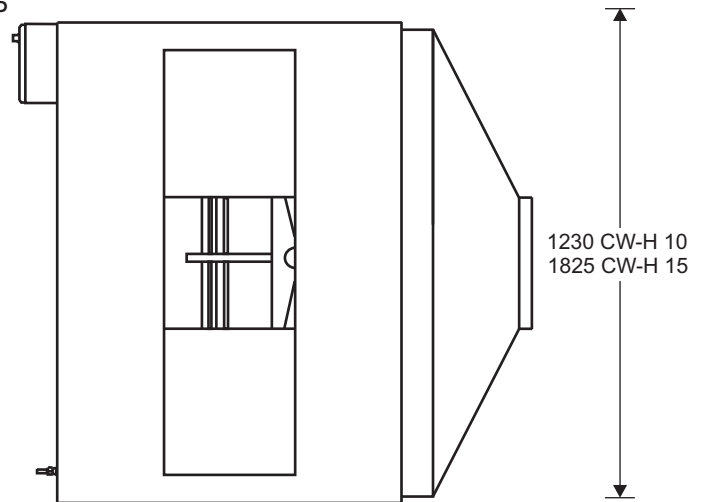
COOLER VIEWS

CWH-10 & 15

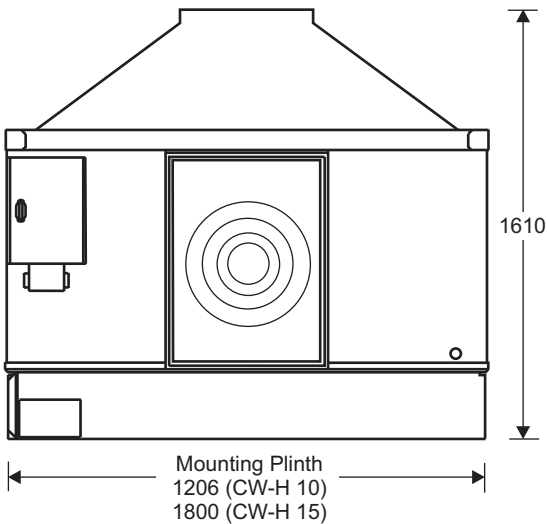
ISOMETRIC



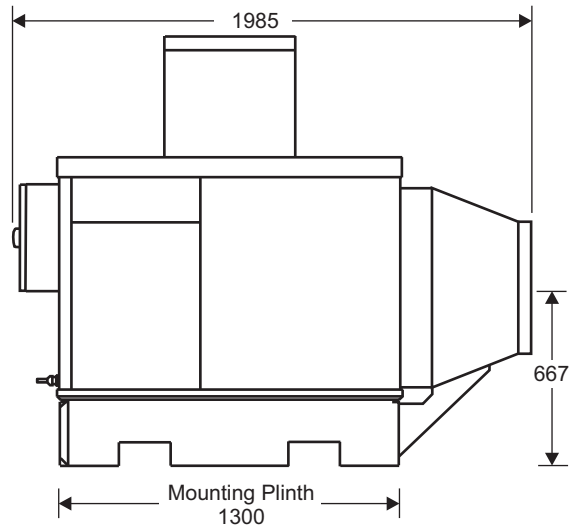
TOP



REAR



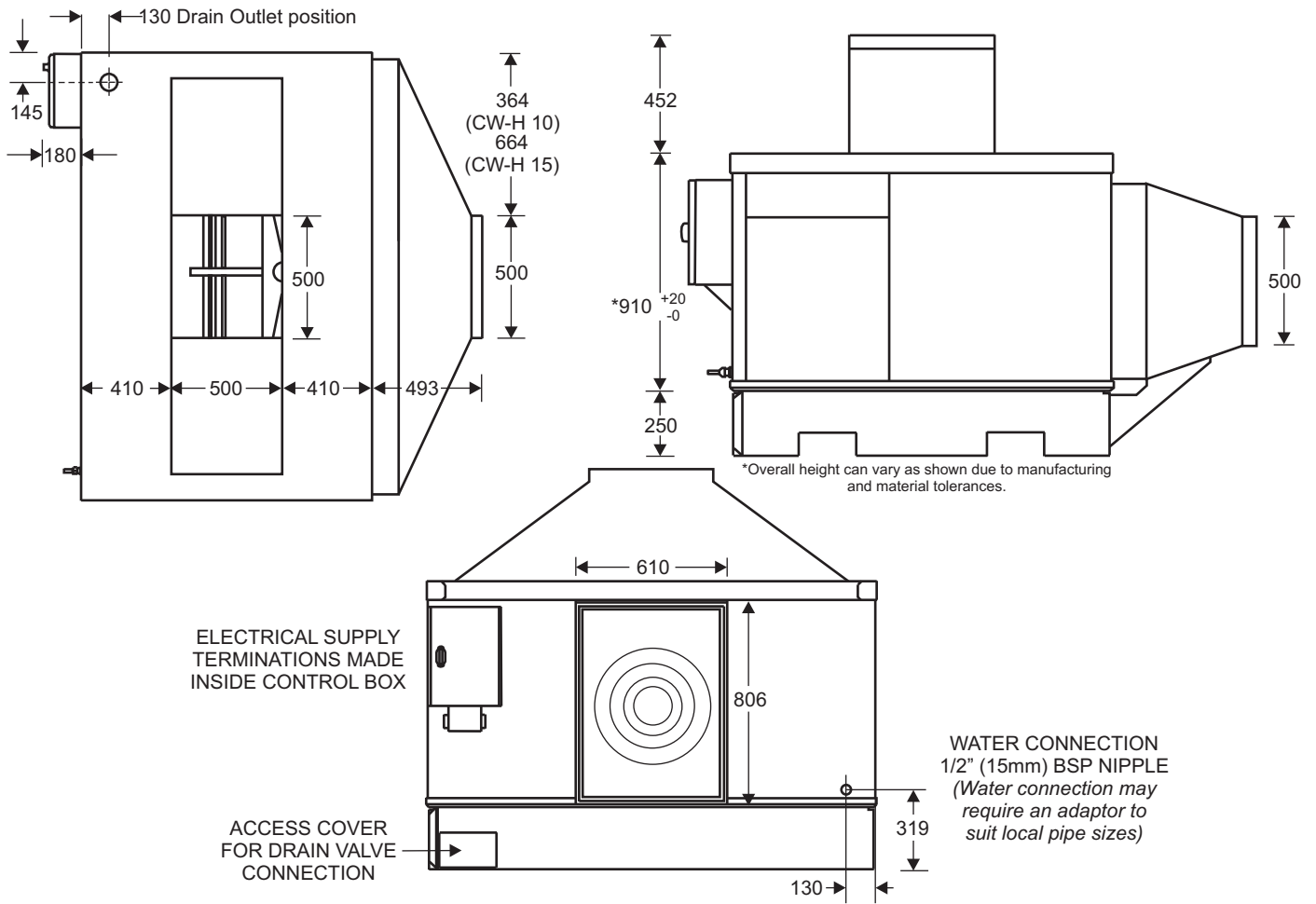
SIDE



<u>Dimensions</u>	<u>CW-H10</u>	<u>CW-H15</u>
Overall		
Width:	1230	1825
Height *	1610 ⁺²⁰ ₋₀	1610 ⁺²⁰ ₋₀
Length	1985	1985 (with Control Box handle)
Mounting Plinth		
Width	1206	1800
Length	1300	1300
Inlet Duct	500(W) x 500(H)	500(W) x 500(H)
Outlet Duct	500(W) x 500(H)	500(W) x 500(H)
Centre line of outlet duct above base		
	667	667

* Overall height can vary as shown due to manufacturing and material tolerances.

COOLER SPECIFICATIONS



SPECIFICATIONS

General

Electrical supply

Water supply

Max. operating temperature

Airflow

Sound pressure

Fan

Integral with motor, backward curved aluminium impellor

Motor

IP 54 die-cast aluminium housing. ECM with PWM control

Pump

SI 'Tornado', 2-pole synchronous, vertical centrifugal 230V, 50 or 60Hz

Chlorinator

SI low voltage, Catalytic Chlorine generator

Drain valve

SI low voltage, vertical, electric drive

Heat exchanger core

SI Synthetic plate type, super efficient

Water reservoir (full)

SI one piece, moulded polymer

Shipping - dimensions

Shipping - weight

Operating Weight

CW-H10

3-phase, 380-480, 50/60 Hz, 10 amps

1/2" BSP male connection, min 100 kPa, max 800 kPa, 20 L/min

55°C ambient (shade)

800 L/sec - at 0 - 200 Pa

73.5 dB(A) at 1m on centerline from discharge

500 dia x 285 w

Input Power 1400W (Nominal)

2 pumps, 20 L/min @ 1m head
Input Power 20W ea

2 chlorinators

1 1/2" (40mm) BSP male

2 cores

45 L

1985L x 1230W x 1170H

180 kg

225 kg

CW-H15

3-phase, 380-480, 50/60 Hz, 10 amps

1/2" BSP male connection, min 100 kPa, max 800 kPa, 20 L/min

55°C ambient (shade)

1100 L/sec - at 0 - 200 Pa

79 dB(A) at 1m on centerline from discharge (to be confirmed)

560 dia x 285 w

Input Power 1800W (Nominal)

3 pumps, 20 L/min @ 1m head
Input Power 20W ea

2 chlorinators

1 1/2" (40mm) BSP male

3 cores

65 L

1985L x 1825W x 1170H

220 kg

265 kg

EMPLOYER AND EMPLOYEE RESPONSIBILITIES

The installation and maintenance of air conditioning units at height has the potential to create Occupational Health and Safety issues for those involved. Installers are advised to ensure they are familiar with the relevant State and Federal legislation, such as Acts, Regulations, approved Codes of Practice and Australian Standards, which offer practical guidance on these health and safety issues. Compliance with these regulations will require appropriate work practices, equipment, training and qualifications of workers.

Seeley International provides the following information as a guide to contractors and employees to assist in minimising risk whilst working at height.

Installer and Maintenance Contractors

A risk assessment is an essential element that should be conducted before the commencement of work, to identify and eliminate the risk of falls or to minimise these risks by implementing control measures.

Risk Assessment

A risk assessment of all hazardous tasks is required under legislation.

There is no need for this to be a complicated process, it just is a matter of looking at the job to be done and considering what action(s) are necessary so the person doing the job does not injure themselves.

This should be considered in terms of:

- What are the chances of an incident happening?
- What could the possible consequence be?
- What can you do to reduce, or better still, completely get rid of the risk?

Some points to consider:

- What is the best and safest access to the roof and working areas?
- If a worker is alone, who knows they are there and if they get into difficulty, how can they summon help? (Call someone on the ground? Mobile phone? etc.)
- What condition is the roof in? Should the trusses, underside or surface be checked?
- Does the worker have appropriate foot wear?
- Are all power cables / extension leads safe and appropriately rated?
- Are all ladders, tools and equipment suitable in good condition?
- Where ladders are to be used, is there a firm, stable base for them to stand on? Can they be tied or secured in some way at the top? Is the top of the ladder clear of electricity supply cables?
- Is there a roof anchor to attach a harness and lanyard to? If so, instruction should be issued for the use of an approved harness or only suitably trained people used.
- Are all tools and materials being used, prevented from slipping and falling onto a person at ground level? Is the area below the work area suitably protected to prevent persons walking in this area?
- Does the work schedule take into account weather conditions, allowing for work to be suspended in high winds, thunder storms/lightning or other types of weather giving wet, slippery surfaces?
- Is there an on-going safety check system of harnesses, ropes, ladders and access/lifting equipment and where they exist on roofs, anchor points before the commencement of work?
- Is there a system which prevents employees from working on roofs if they are unwell or under the influence of drugs or alcohol?
- Are there any special conditions to consider i.e. excessive roof pitch, limited ground area, fragile roof, electrical power lines?

OTHER IMPORTANT REQUIREMENTS

Never force parts to fit because all parts are designed to fit together easily without undue force.

Never drill any holes in the primary base surface or side walls of the bottom tank (reservoir) of the cooler.

Check the proposed cooler location, to ensure that it is structurally capable of supporting the weight of the cooler, or provide an adequate alternate load bearing structure.

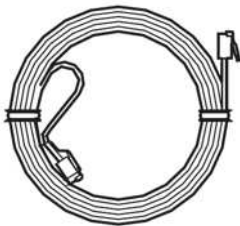

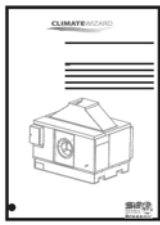

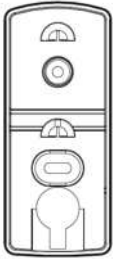
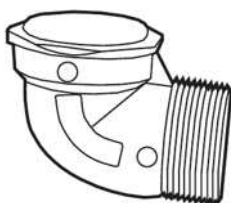



This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

CONTENTS

COOLER INSTALLATION KIT COMPONENTS

1

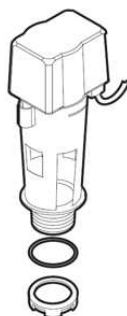
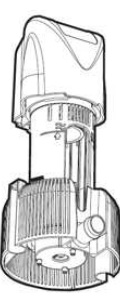

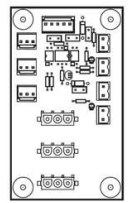
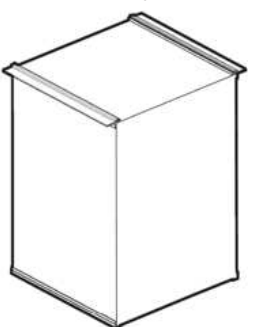
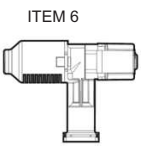
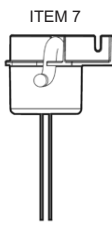
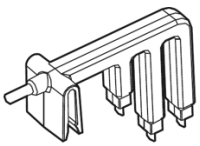
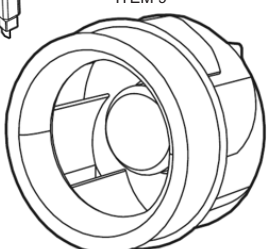
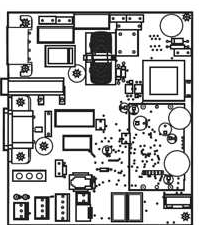
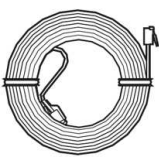
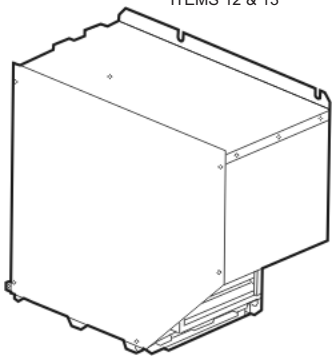
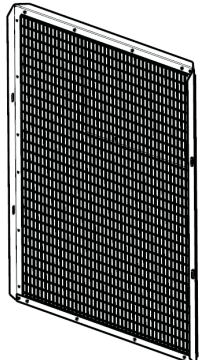
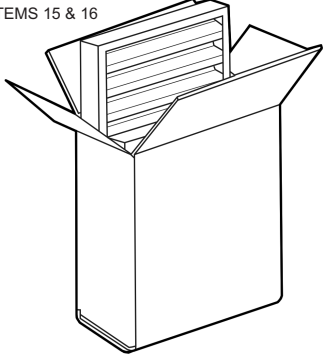
ITEM	SEELEY PART #	DESCRIPTION	QTY
1	834245	CONTROL CABLE 20M	1
2	113210	WALL CONTROL	1
3	859736	INSTRUCTIONS - INSTALLATION, SERVICE & OPERATION	1
4	879239	WARRANTY CARD	1
5	584331	WALL CONTROL MOUNT PLATE	1
6	859859	ADAPTOR DRAIN ELBOW	1
7	805306	SCREW PAN PHIL 6ABX1" ZNP	2
8	804644	WALL PLUG YELLOW 5MM	2
9	804439	SCREW PAN PHIL M8 X 3/8 Needle Point	36

REPLACEMENT, OPTIONAL or SPARE PART COMPONENTS

2

ITEM	SEELEY PART #	DESCRIPTION
1	094441	DRAIN VALVE 12VDC
2	095806	TORNADO PUMP 1.5m LEAD AMP PLUG
3	094427	WALL CONTROL
4	670591	BMS INTERFACE PCB
5	113821	CORE BLOCK CW-H
6	825250	SOLENOID WATER INLET
7	825236	CHLORINATOR PROBE ASSY
8	833835	WATER LEVEL & SALINITY PROBE
9		MOTOR & FAN ASSY CW-H 10 & 15
10	670546	COOLER CONTROL PCB
11	833897	CONTROL CABLE 40M
12	120058	INLET AIR FILTER ASSEMBLY CW-H 10
13	120065	INLET AIR FILTER ASSEMBLY CW-H 15
14	120102	INLET AIR SAFETY GRILLE (optional)
15	120089	REPLACEMENT FILTER SET CW-H 10
16	120096	REPLACEMENT FILTER SET CW-H 15

Cooler location

Check the proposed cooler location, to ensure that it is structurally capable of supporting the weight of the cooler, or provide an adequate alternate load bearing structure.

Model	Shipping Weight	Operating Weight
CW-H 10	180kg	220kg
CW-H 15	225kg	265kg

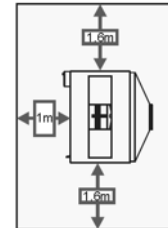
Always locate the cooler where it will receive a plentiful supply of fresh air; NOT in a recess where it may be starved for air or where the air is polluted.

Air exiting the exhaust hood is warm and heavily laden with moisture. Ensure the cooler's exhaust outlet location will not cause corrosion or damage to other nearby items. Do not allow exhaust air to re-circulate into the air intake of the cooler.

• **Ensure the location is a minimum of:**

- **3.0m from a solid fuel heater flue,**
- **1.5m from a gas flue,**
- **5.0m from a sewer vent**
- **Rear = Min 1.0m from a wall, 1.6m at sides**

to allow easy access for maintenance and core replacement.



Allow adequate access to and around the cooler for maintenance. Provision must be made for access to electricity, water supplies and drains. Note: Do you need to discuss the installation of items like safety anchor points with the customer?

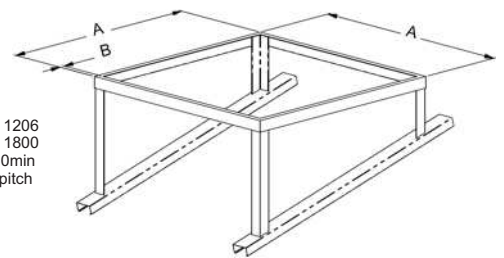
Mounting/support

Industry standard support frames can be used with this cooler.

Recommended steel specification:

50*50*3mm RHS Galvanised or Painted

CW-H 10 A = 1300 * 1206
 CW-H 15 A = 1300 * 1800
 CW-H 10 & 15 B = 50min
 Angle to match roof pitch

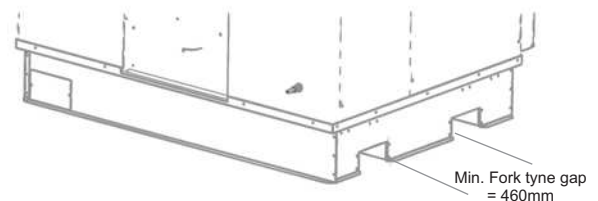


Unpacking the cooler

The cooler will be delivered wrapped in a plastic stretchwrap film which will need to be removed before installation. A small bag of Installation components along with the exhaust hood sheet metal components can be found under the lid of the main cabinet of the cooler. The lid will need to be removed and the exhaust transition components assembled and fitted to the lid before re-installing the lid assembly back onto the cooler. The wall control and communications cable, along with ancillary mount plates, fasteners and drain adaptors will need to be placed aside for later connection.

Moving the cooler

The cooler has in-built fork-truck tyne openings in the base for ease of movement. The openings can also be used with lifting straps or slings (refer diagram & see below)



Lifting the cooler

The cooler may be lifted either by fork-truck or crane with slings. The method for lifting by crane is by lifting straps through the cooler base fork-truck tyne openings. Do not attempt to lift using any cabinet features or by retro-fitting lifting lugs. The cabinet may be damaged and/or lift safety compromised.

It is recommended to use a spreader bar on the straps or slings and/or to protect the upper edges of the cooler with a corner protector beneath the lifting straps to avoid any damage to the cabinet during the lift.

Vibration isolation

Waffle pads are recommended to be used under each corner of the cooler. Pad size approx. 200 * 200mm. Use industry standard methods of fixing to the building structure.

Duct Connections

Vibration absorbing flexible connections are recommended for all duct connections to the cooler, for any ducts that are attached to the building structure.

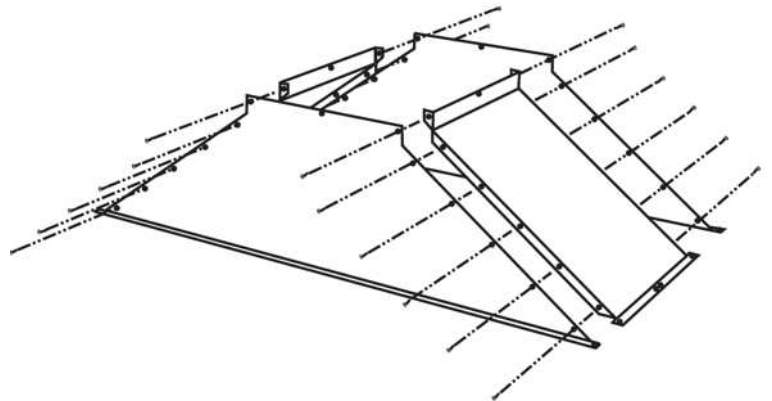
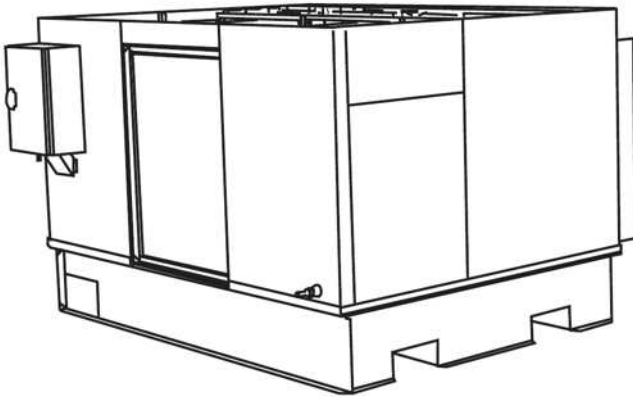
All ducts attached to the flexible connection must be independently supported.

Exhaust Duct requirements

Ensure the exhaust discharge opening is located and oriented in such a way as to avoid exhaust air re-entering the cooler inlet. Exhaust air is warm and heavily laden with moisture.

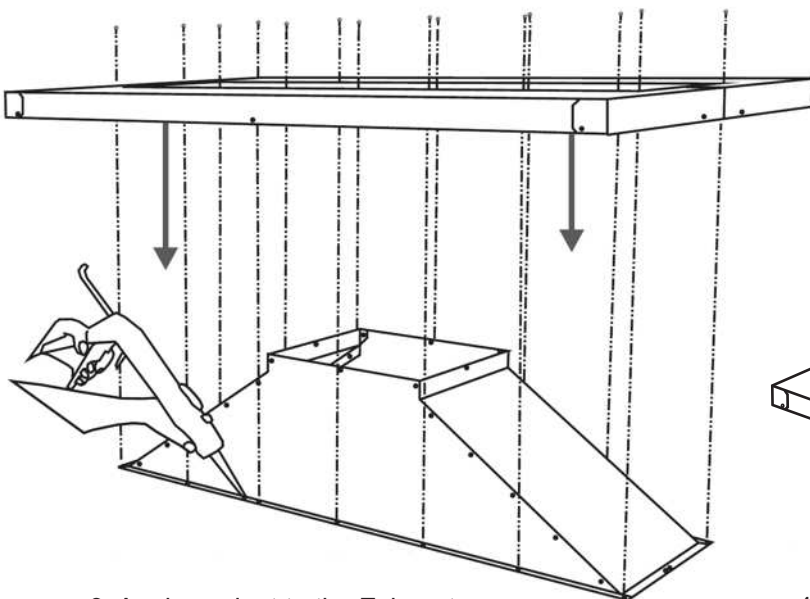
Exhaust Transition Assembly

The exhaust transition is supplied in knock-down form; its components are to be found beneath the lid of the cooler after shipping. This requires the installer to remove the lid of the cooler, remove the componentry and assemble the Exhaust Transition and fit it to the lid with the supplied fasteners, fit the Inlet Air Filter or Safety Grille, then refit the Lid/Exhaust assembly back onto the cooler. The flange of the exhaust transition must be fitted beneath the lid of the cooler. Use a high quality sealant that is neutral cure, flexible and has good UV and weather resistance between the exhaust transition flange and the lid. (Fig. 3)

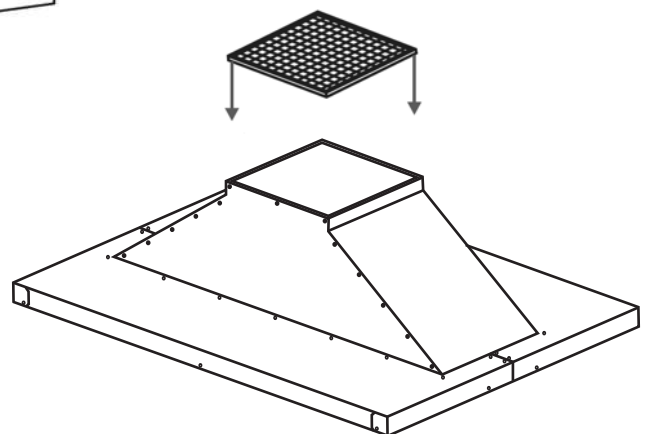


1. Remove lid, obtain exhaust transition and installation components

2. Assemble the exhaust transition



3. Apply sealant to the Exhaust Transition flange. Fit the lid **over** the exhaust transition and assemble.

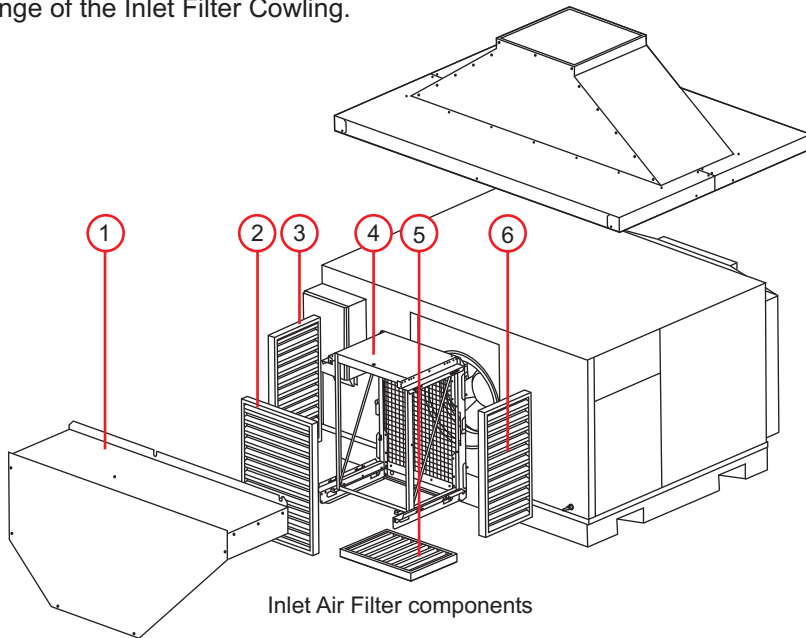


4. Assemble the exhaust grille to the Lid assembly.

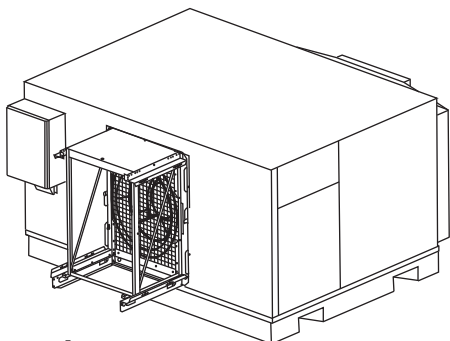
Inlet Air Filter Assembly

Climate Wizard coolers are supplied ex-factory with an Inlet Air Filter assembly. Should the Filter Assembly not be required an optional Safety Grille is available and must be fitted for safety reasons.

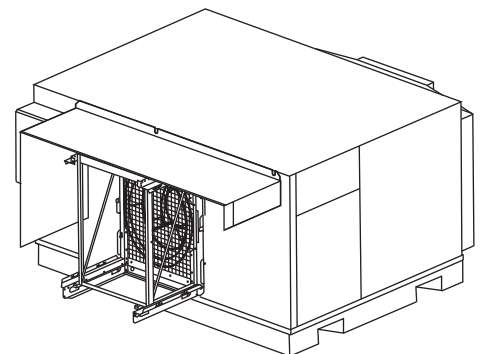
The Inlet Air Filter assembly is supplied in separate cartons when shipped with the Climate Wizard. This requires the installer to remove the lid of the cooler, remove the filters from their shipping position in the frame, fit the filter frame to the cooler, secure the cowling top and sides to the filter frame and cooler, slide the filters back into the frame and secure the cowling front access panel with the supplied fasteners. Refit the Lid/Exhaust assembly back onto the cooler, over the flange of the Inlet Filter Cowling.



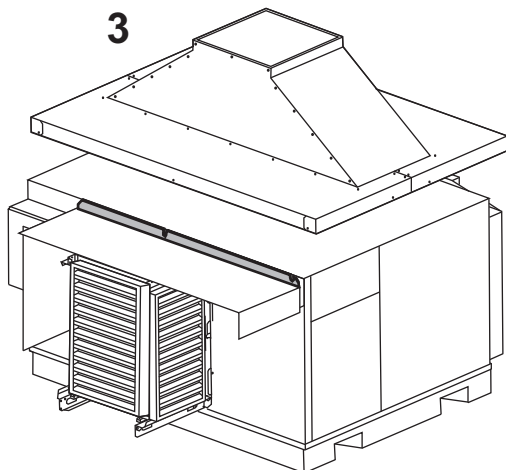
No.	Description
1	Inlet Air Filter Cowling
2	Air Filter - Front
3	Air Filter - LH (CWH-15 Only)
4	Inlet Air Filter Frame
5	Air Filter - Base
6	Air Filter - RH



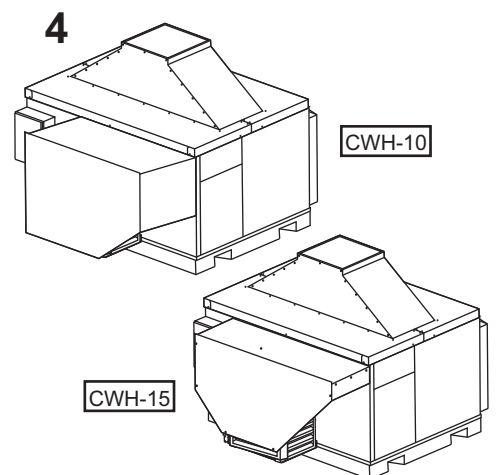
1 Fit filter frame to inlet of cooler



2 Fit the Filter Cowling top and sides to the Filter Frame and Cooler.



3



4

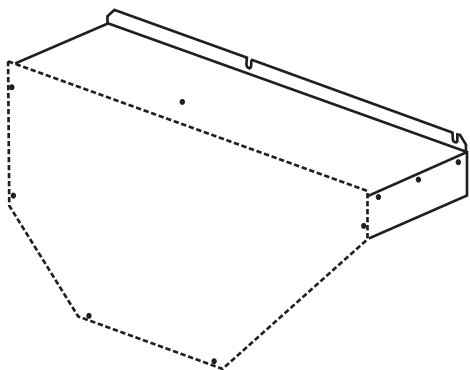
The top lip of the filter cowling (shaded, Fig. 3) must locate inside the lid of the cooler (Fig. 4), this may require the lid to be unfastened (if already assembled) and lifted or, alternately, assemble the lid to the cooler after the filter assembly and cowling is fitted. Insert the filters to the filter frame. Fit the front panel of the cowling onto the cowling assembly.

Fitting the Inlet Air Filters

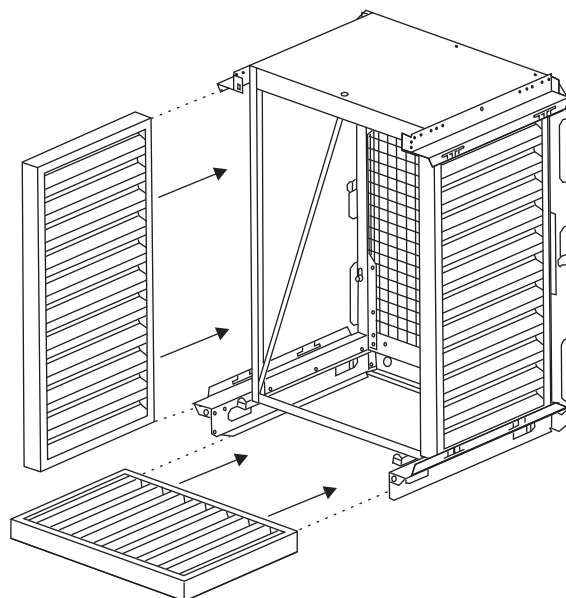
When servicing the filters the front plate of the filter cowling must be removed to provide access. To fit the filters into the Air Filter frame, slide the bottom filter into position into the base of the frame. Slide the side filter(s) into the frame in the same manner. To fit the front filter, locate the top edge of the filter under the top brackets and lift to engage the filter inside them. Allow the filter to drop, to engage the 2 bottom brackets at the bottom of the frame.

The Air Filters should be replaced as soon as airflow through the filters is restricted by choking or clogging with dust or contaminants. The frequency of changing the filter is dependant on the air quality in situ.

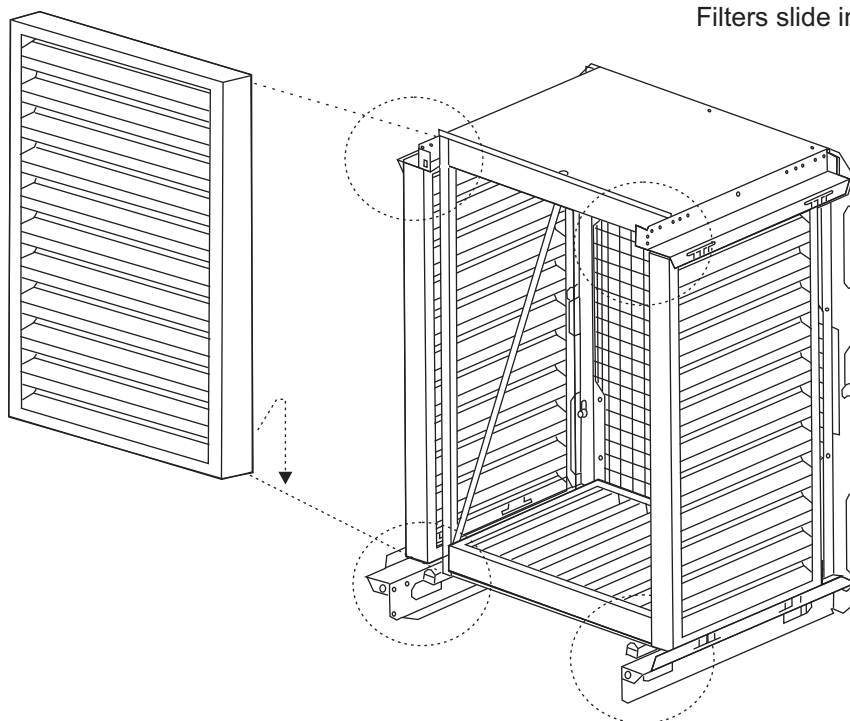
Replacement Inlet Air Filters are available from SI Service Agents and Climate Wizard distributors.



Remove screws to dismantle the front section of the filter cowling, the lid and sides of the cowling remain attached to the cooler.



Filters slide into frame channels



To fit the front filter, locate the top edge of the filter under the top brackets and lift to engage the filter inside them. Allow the filter to drop, to engage the 2 bottom brackets at the bottom of the frame.

INSTALLATION

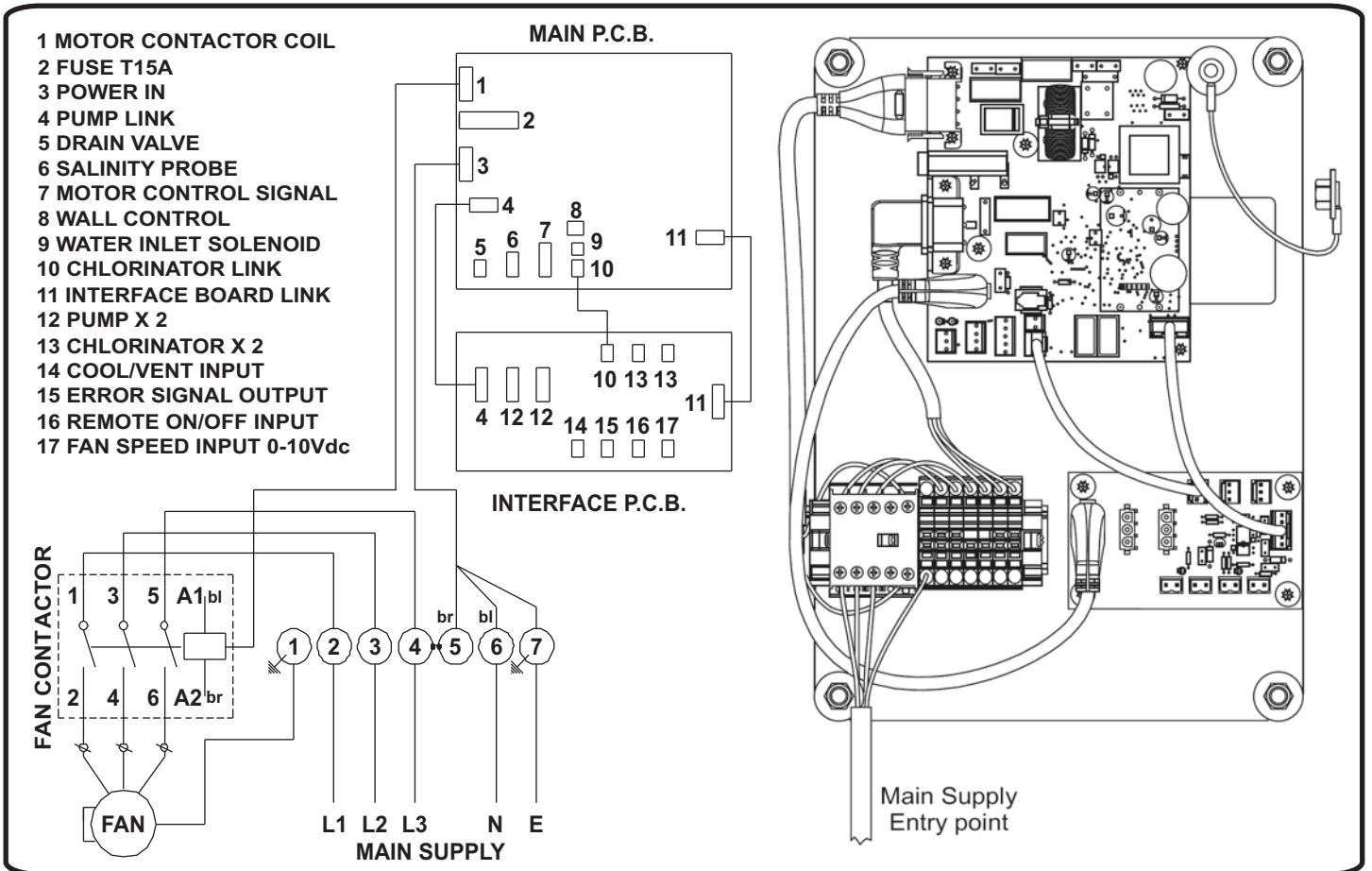
Electrical Supply Installation

Installation of the Cooler must conform to local electrical rules, regulations and standards.

It is a requirement of Seeley International that all Coolers be wired with a dedicated circuit to the distribution board.

Disconnection from the mains supply may be achieved by incorporating a switch in the fixed wiring in accordance with the local wiring rules. **Specification : 380 - 480V / 50 or 60Hz / 3 Phase / 10Amps***

Climate Wizard requires 3-phase electrical power to be supplied. Minimum 10 amp, 4-wire+ ground conductors supplied from an independent circuit breaker. If required, a main isolation switch is to be furnished by the contractor adjacent to the cooler. Main power terminals are provided inside the electrical cabinet with glands provided for cable entry.



* 50 & 60Hz models require differing component configurations that vary according to the supply frequency. Specifically, the pump is unique to the frequency of supply.

Water Supply Installation

Installation of the water supply to the cooler must conform to local plumbing rules, regulations and standards:

The following specifications for water supply are required:

Water Connections : 1/2" BSP Female threaded fitting required
Water Supply : 100 - 800 kPa @ 20L/min (115 psi) MAXIMUM
Water Supply Temperature : 40°C MAXIMUM

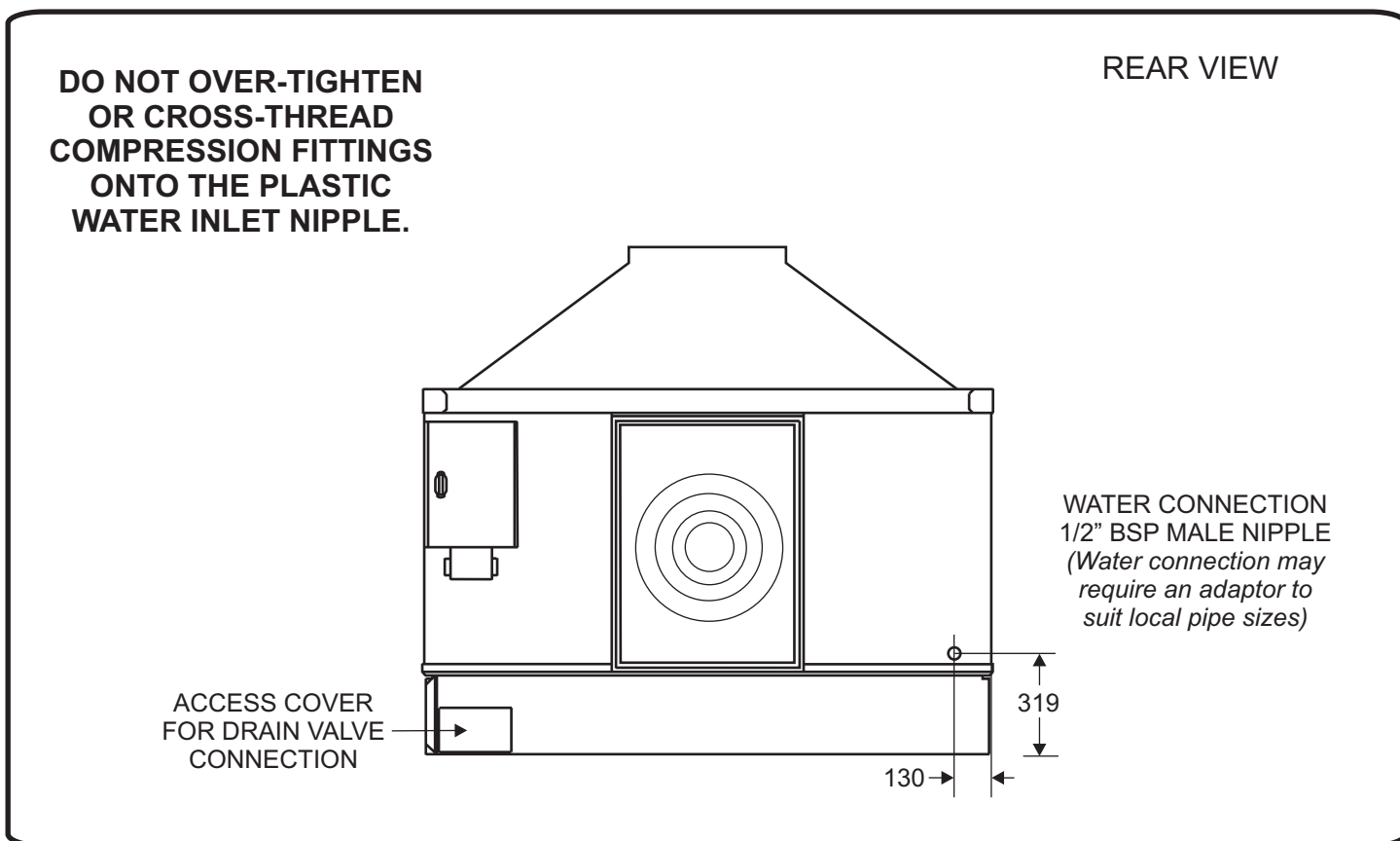
Important! *If the water pressure exceeds this maximum specification then a pressure reducing valve is required and must be supplied and fitted by the installer.*

The installer must provide a manual 1/4 turn ball type shut off valve (do not use a stop cock) in the water supply line adjacent to the cooler, subject to local plumbing regulations. This allows the water supply to be isolated whenever work needs to be done on the cooler.

In areas subject to freezing, the water line needs a drain down facility.

Important! *Flush the water pipe to remove any swarf before final fitting. Swarf can lodge in the solenoid , preventing it from functioning correctly.*

Climate Wizard requires a permanent water supply to be connected. 1/2 inch BSP male connection point provided on the cooler (see diagram), suitable for compression fitting. Pressure range required - 100 kPa - 800kPa at flow rate of 20 L/min.



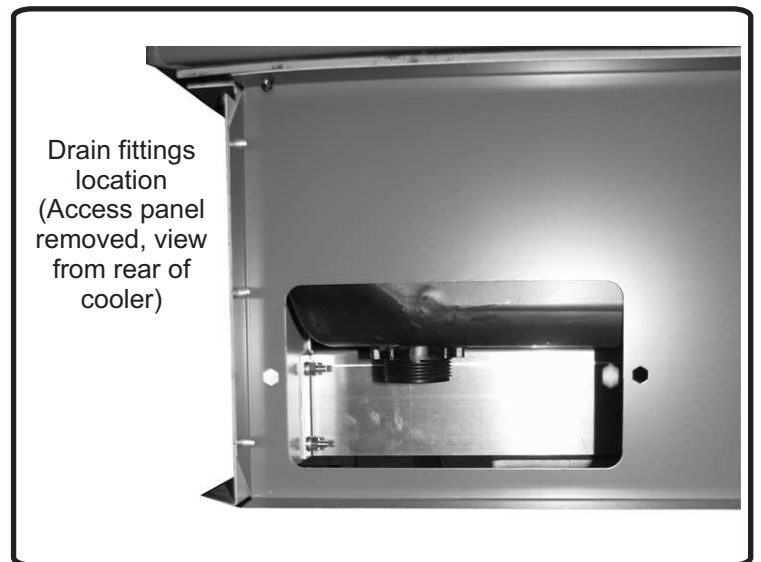
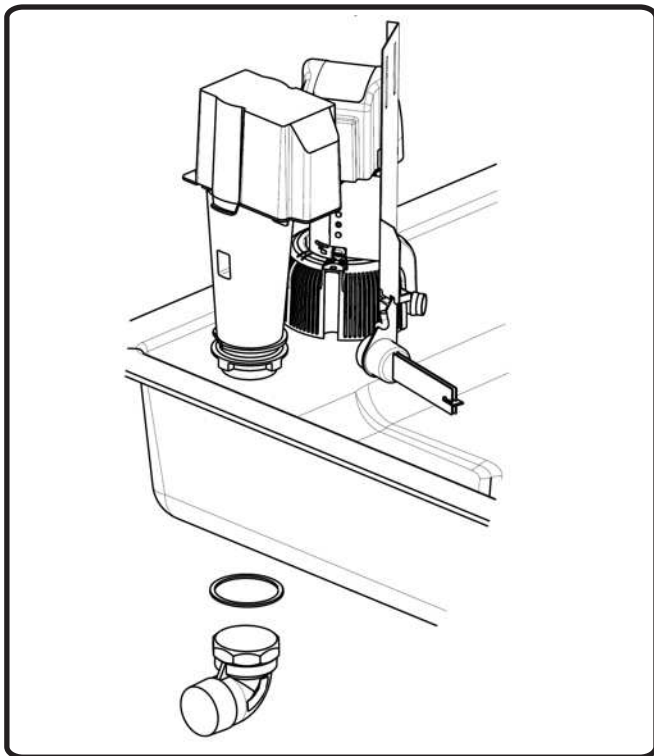
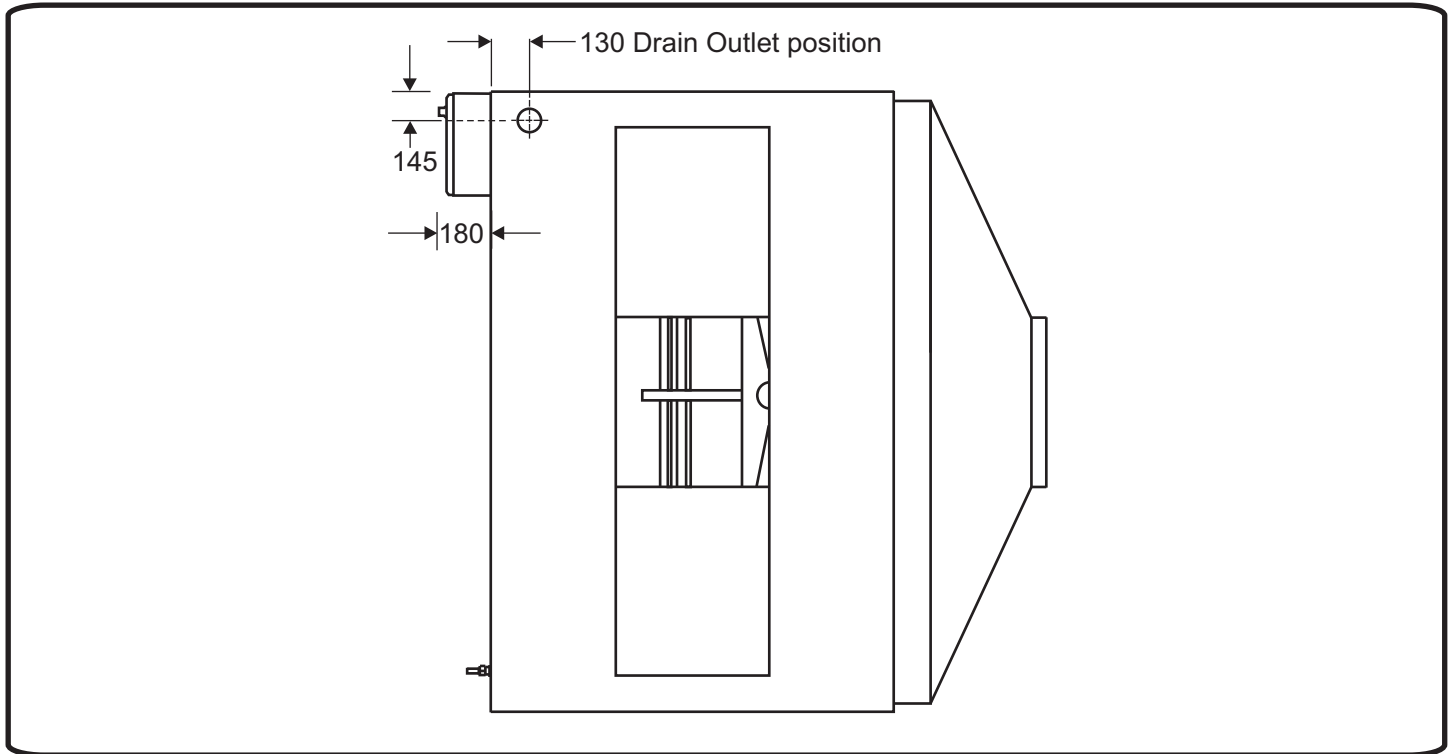
Drain Installation

A built-in Drain Valve is controlled by the water management system. The valve has 1½" (40mm) BSP male connection and is provided with a reducing fitting for connection (if desired) to a flexible hose for running water to waste. See diagram for location. Recommended minimum drain hose internal diameter is ¾" (20mm).

DRAIN VALVE

The correct drain system must be used. Water drained from the drain valve must be carried away to a suitable discharge point on the building or property, in accordance with local regulations.

It is a requirement of Seeley International - Never drain the water directly on to the roof



Control Schemes

Climate Wizard coolers are supplied from the factory with one (1) Wall Control and a 20m control cable. This makes it possible for the Cooler to be controlled independently and automatically from the zone to which it is delivering cool air. No additional equipment is required. The Wall Control incorporates a thermostat that regulates fan speed to maintain indoor temperature within $\pm 0.5^{\circ}\text{C}$ of the set temperature. Climate Wizard Coolers are also supplied with an interface to enable the cooler to be controlled from an external location, using a BMS system.

Whatever control option is being used, the inbuilt Climate Wizard water management and fault monitoring features are fully operational. The Climate Wizard control scheme incorporates some Parameters that can be altered to other settings if the default settings are not suitable.

Local zone control

Individual coolers can be controlled completely from within their cooling zone using the Wall Control-thermostat supplied. A 20m connecting cable, plugged each end is supplied. 40m cables are also available on request. - p/n 833897. Maximum permissible cable length between the Wall Control and the cooler is 40m. No interconnection between coolers to achieve 'Group control' is possible.

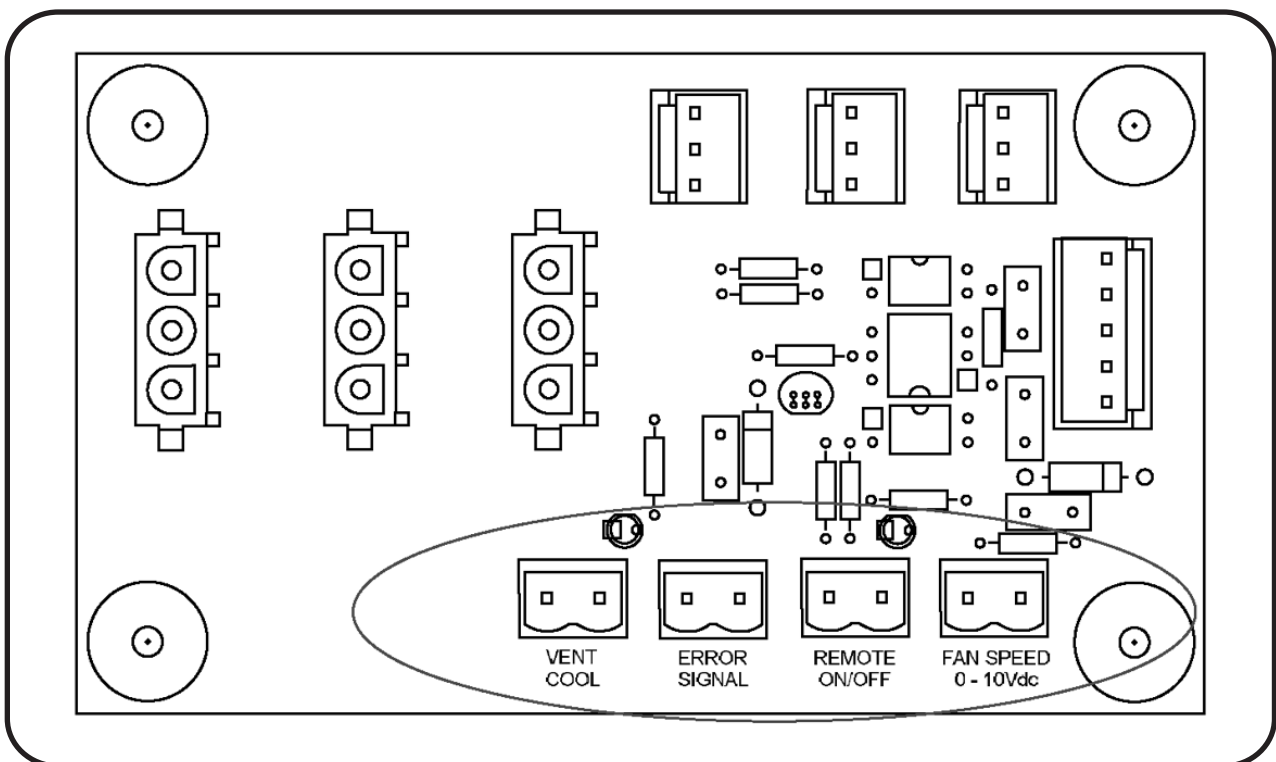
Building Management System (BMS) Interface

Climate Wizard Coolers are supplied with an 'Interface PCB'.

This can be set up to control the Climate Wizard from EXTERNAL devices, such as PLCs and Building Management Systems. In this case the Climate Wizard will cease to function in its standard AUTO [Auto] or MANUAL [Man] mode and will respond only to the external commands.

Control from remote location

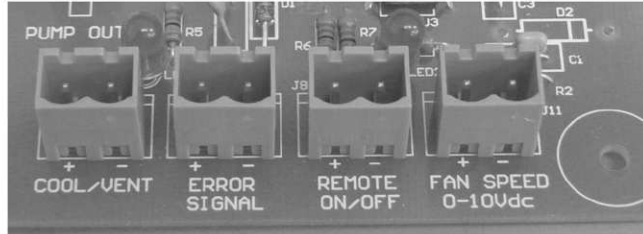
Four plug receptacles are provided in the electrical control enclosure as shown. These are solely for the control of the cooler from a remote location.



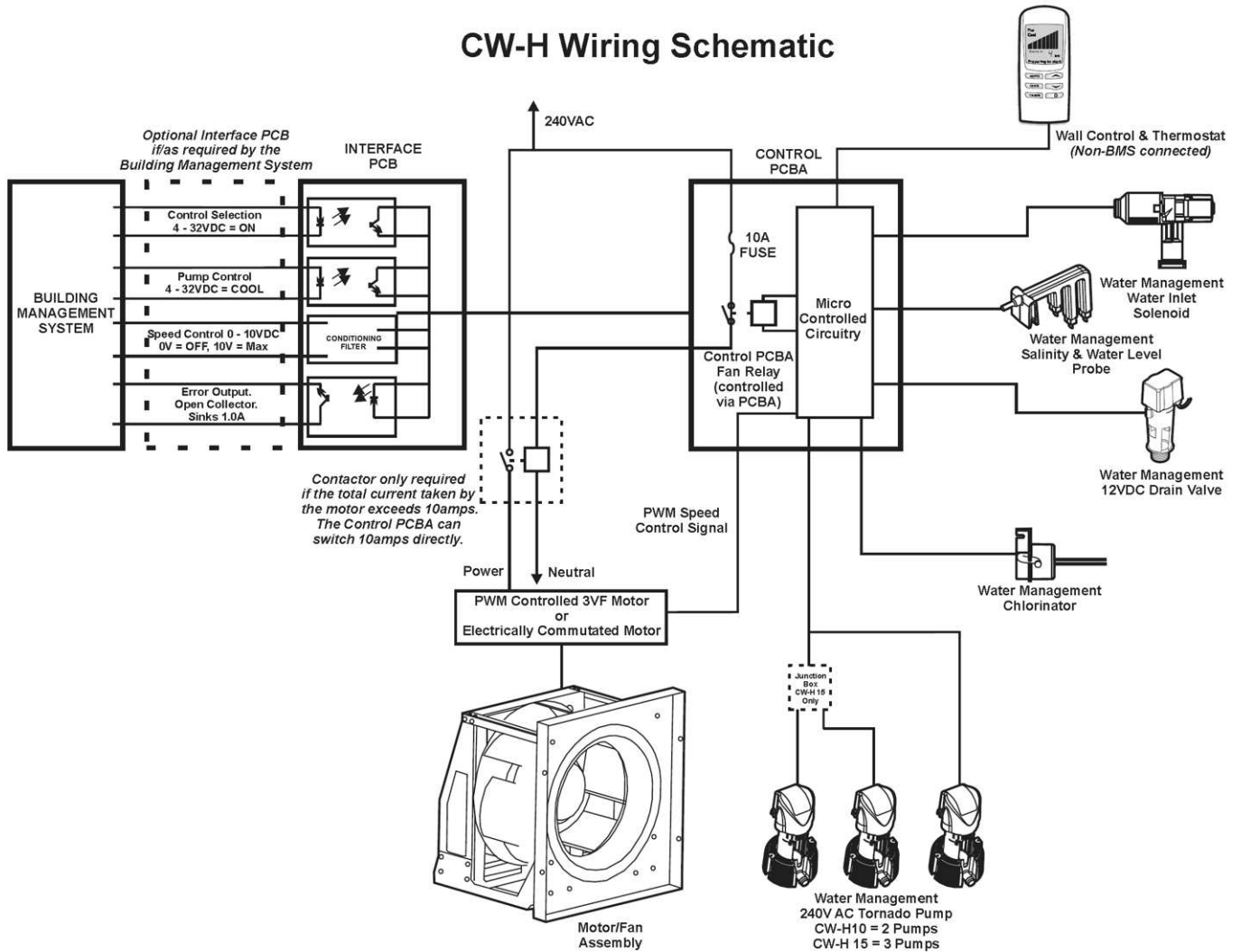
Control Schemes

Remote ON-OFF

Remote ON-OFF function can be achieved regardless of whether the Climate Wizard is controlled from an external source or not. If, at any time that the cooler is running under its local Wall Control, a voltage (4-32 VDC) is switched onto the 'Remote ON / OFF' receptacle the cooler will shut down until the voltage disappears. This condition of being shut down in this way will be evidenced on the Wall Control by the words 'Preparing to start' flashing on the screen.



CW-H Wiring Schematic



Control Schemes

Water management system

Tank (reservoir) drain valve control

- When power switched on to the cooler, the Drain Valve opens to check operation of the Valve.
 - Drain Valve remains open until COOL mode selected.
 - When COOL mode selected the Drain valve shuts.
 - Drain Valve opens when:
 - COOL mode switched OFF and tank drain delay is activated. Drain Valve remains open until next COOL mode activated.
- OR
- Salinity Control demands the tank (reservoir) to be drained. (Refer to the Salinity Control section following)

Inlet solenoid valve control - water

- Opens 9 seconds after COOL mode starts (in order to give Drain Valve time to shut).
- Opens if water level is below the bottom probe.
- Remains open until water level reaches top probe.
- Will also open at anytime that Salinity Control demands fresh water.
- Incorporates soft switching to avoid water-hammer.

Pre-wet cycle

(Pre-wet runs the pumps for 3 minutes to ensure the Cores are fully saturated when COOL mode is activated).

- Default setting - Pre-wet cycle enabled
- Pre-wet duration 3 minutes
- PreWet always occurs when COOL mode is selected after a Mains power interruption.
 - If COOL mode is selected and the Mains power has not been interrupted, then a PreWet will occur if the Drain has not been activated since the last time COOL mode was selected.
- During pre-wet cycle the fan runs on low speed.
- After Pre-wet, fan will resume running at Wall Control speed setting

Pump control

- When COOL selected, fan and pump will start 30 seconds after water level has reached the bottom probe
- After a Pre-wet the pump then cycles continuously:
 - ON for 1 minute
 - OFF for 8 minutes
- Fan speed is slowed during watering cycles to prevent water take-off from the cores entering either the exhaust air stream or the cooled air stream and the building ducting.

Salinity Control

- Water Conductivity sensing:
 - Measures water conductivity for 10 seconds within every minute
 - When conductivity exceeds the upper set point the water inlet solenoid valve is opened to allow fresh water entry.
 - Monitoring of conductivity is continuous during this cycle.
 - Inlet solenoid valve remains open until water level reaches top probe, then it closes
 - If water reaches top probe, but conductivity is still too high, a drain cycle starts
 - Drain valve opens until water level falls below bottom probe, then valve closes immediately, and inlet solenoid valve opens to refill the reservoir.
 - Will sense conductivity down to 9 uS (about 4ppm) (ie: rain water)
- Water Usage sensing:
 - Number of times that reservoir is filled from bottom probe to top probe is counted. When this count reaches 8, a drain cycle is initiated.
 - Drain valve opens until water level falls below bottom probe, then valve closes immediately, and inlet solenoid valve opens to refill the reservoir.
 - Pumps enabled to run at any time during the salinity drain cycle.

Chlorinator Control

The Chlorinator is a pair of specially treated plates. When energised and submerged in water, electrical current flows between them, generating chlorine. There are two (2) sets of Chlorinator plates in the Climate Wizard. Chlorine is known to kill bacteria in water supplies and the Climate Wizard Chlorination system is designed to minimise bacteria levels within the cooler.

- Chlorinators are active at all times that the cooler is in COOL mode, AND the water level is above the bottom probe, AND the pumps are not running (8 minutes in every 9 minutes), AND the salinity control is not sensing (50 seconds in every 60 seconds).

Control Schemes

Changing Control Parameters

To enter Parameter mode using a Wall Control, the following process must be carried out within Four (4) minutes of mains power being applied to the cooler. If unsure of time since the last Mains Power "ON", remove Mains Power to the cooler (Isolator Switch or Circuit Breaker) for a minimum of six (6) seconds so the mode can be entered.

1. Whilst wall control is OFF, push and hold "AUTO" for minimum three (3) seconds. After three (3) seconds whilst still holding "AUTO" button press the "DOWN" button. (If "DOWN" button is pressed before three (3) seconds, nothing will be on the display. If "AUTO" button, is continued to be held subsequent presses of "DOWN" button will allow access).
2. When parameter mode has been entered, screen will display "A1" and "Param". Pressing "UP" or "DOWN" buttons will scroll through parameters "A1" to "B3" (Refer to table below for factory settings).
3. To view parameter number set in wall control press "AUTO" momentarily. Figure "A#" on screen will change to number set, and "Param" will change to "value".
4. To alter "value" of selected parameter press "UP" or "DOWN". Numbers will change to show different values parameter can be set to.
5. To store the selected value, press "AUTO". Screen will go blank momentarily as wall control stores parameter change, and returns screen to "A#" and "Param".
6. To exit parameter mode or escape from an alteration without storing a change press "TIMER" button instead of "AUTO" button. Remember, once step five (5) has been carried out, new parameter change is permanent until again altered.
7. If no buttons are pushed on wall control, after three (3) minutes screen will reset to "OFF" state. Procedure to enter parameter mode must be re-initiated.

PARAMETERS

No.	DESCRIPTION	VALUE
A1	Water salinity control method:	
	- Conductivity measuring	00*
	- Counts low to high probe fills	01
A2	Not applicable to Climate Wizard	
A3	Pre-wet control:	
	- No pre-wet	00
	- Pre-wet	01*
A4	Wall Control back light:	
	- Backlight 'OFF'	00
	- Backlight 'ON'	01*
A5	Conductivity set point:	
	- Normal conductivity - 4275 μ S/cm	00*
	- Low conductivity - 2305 μ S/cm	01
A6	Tank (reservoir) drain delay:	
	- Instant drain at COOL off	00
	- Drain 3 hours after COOL off	01
	- Drain 12 hours after COOL off	02
	- Drain 3 days after COOL off	03*
A7	Auto re-start after Power failure:	
	- Requires manual re-start when power OFF	00*
	- Auto restart	01
A8	Temperature units:	
	- Display $^{\circ}$ C	00*
	- Display $^{\circ}$ F	01

* = Default Value



A294-B

Wall Control Installation

Locating the wall control

(Stand Alone & Supplementary Cooling)

The wall control should be placed approximately 1.5 metres above the floor, in the general area of the cooled zone.

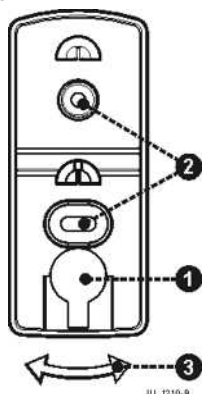
Placement of the Wall Control is critical for correct functioning of the inbuilt thermostat (incorporated in the wall control). The following points must be taken into consideration:

- Avoid direct sunlight exposure.
- Avoid mounting on external walls.
- Avoid mounting the wall control near heat sources such as room heaters, stoves and TV's.
- Do not locate in the direct airflow from the duct outlets.
- Do not locate in strong drafts or in dead spots such as corners and confined spaces.
- Always seal the cable entry hole in the wall. Hot air coming through the wall may interfere with the temperature measurement.



CAUTION! Always make sure there are no electrical cables, gas or water pipes, or the like, behind where you intend to drill.

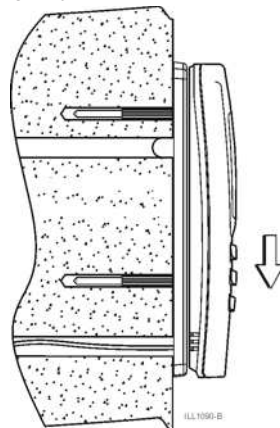
1 Fixing the wall control bracket to a plasterboard wall



Use the bracket as a template.

1. Drill the 16mm hole for the wall control cable
2. Drill the 5mm holes for the wall plugs.
3. Insert the wall plugs into the holes. Align and screw the bracket into position using the supplied screws.

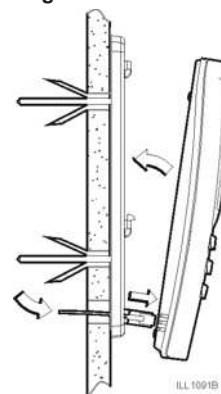
2 Fixing the wall control bracket to a brick wall



To mount the wall control bracket on a brick wall, follow the previous instructions (Fig 1) using the wall plugs and screws provided.

Note that the wall plugs require 6mm holes. Mount the wall control following the procedure in Fig 3.

3 Fitting the wall control to the mounting bracket



1. Pull the wall control cable through the larger hole and plug it into the wall control.
2. Feed the excess cable back into the hole and seal. Slide the wall control over the protruding bracket tabs.
3. Pull the wall control down so the bracket tabs engage and locate with the keyway slots on the rear.

Running the wall control cable to the wall control

Using the loop on the end, draw the cable through the wall cavity to the hole made at the wall bracket. Carefully remove the tape from the cable loops and check that the plug has not been damaged. Connect the cable to the wall control and mount the wall control onto its bracket.

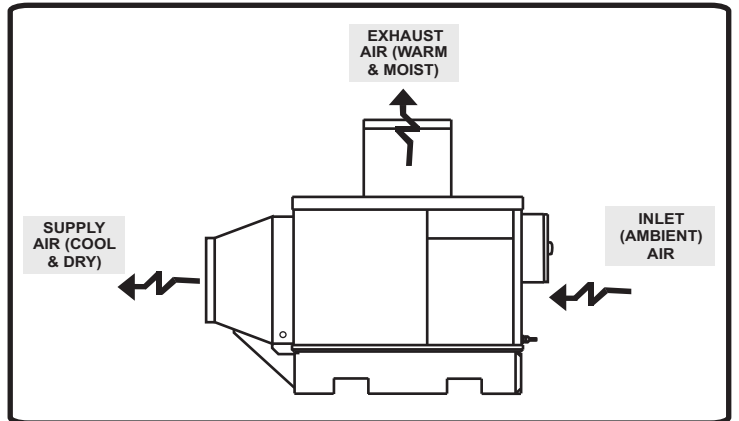
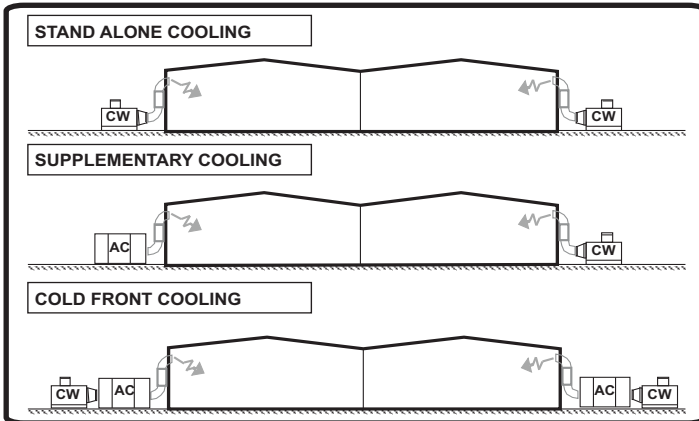
Important! Take care not to damage the cable or plug during this process. Always seal the cable entry hole.

Climate Wizard Cooling Applications

Climate Wizard is designed to be used in 3 different types of applications:

- **STAND ALONE COOLING** - in cases where the Climate Wizard is the primary source of Air Conditioning for the building.
- **SUPPLEMENTARY COOLING** - in cases where the Climate Wizard is used to augment the capacity of the existing air conditioning system, or to extend its reach into the building, or to greatly reduce the energy consumption of the Air Conditioning plant.
- **COLD FRONT COOLING** - in cases where the Climate Wizard is used to pre-cool the fresh air supply to new or existing refrigerated air conditioning plants in order to prolong the life of the plants, to save significant energy, and to greatly reduce demand on existing infrastructure which becomes over-stressed in heat-wave conditions.

In each application type, remarkable energy savings can be achieved compared with conventional Refrigerated Air Conditioning.



Setting the Air Discharge Damper

AIR FLOW BALANCING

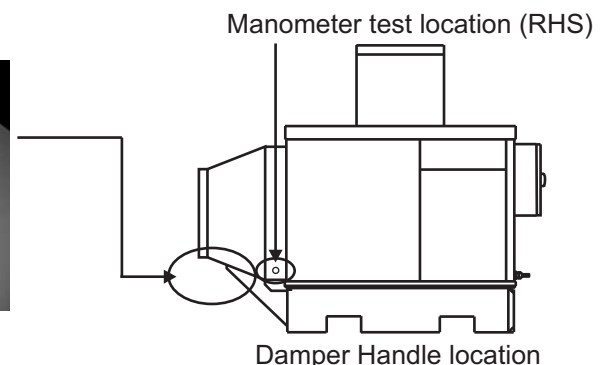
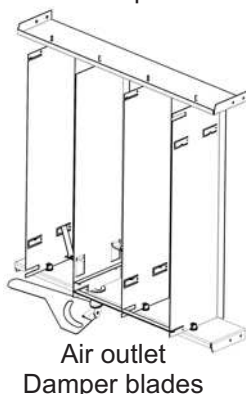
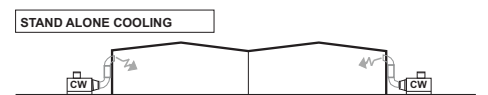
In order for the Climate Wizard to produce cool air it is mandatory that some of the inlet air is forced to return through the heat exchanger and be exhausted to atmosphere. Therefore only a proportion of the total inlet air is delivered into the cooled zone; it's about 50/50. **THIS PROPORTION IS CRITICAL TO ACHIEVING SATISFACTORY PERFORMANCE.** The supply air transition is equipped with a set of dampers that can be adjusted to 'balance' the proportion of supply and exhaust air streams. The damper is factory set, but may need to be re-adjusted during Commissioning depending on the resistance of the duct system.

Underneath the supply air transition is a manual quadrant damper lever with locking screw (see photo below). There is also a hole in the right hand side of the supply air transition suitable for manometer tubes for measuring pressure (see diagram below). **NOTE:** Pressure measuring should be carried out using an accurate instrument, either electronic or "inclined tube manometer". **DO NOT GUESS.**

Air Balancing procedure for STAND ALONE Cooling:

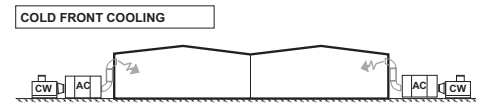
- Connect all external ductwork to the Climate Wizard in preparation for balancing the system.
- Open fully all supply air outlets in the entire ductwork system.
- Start the Climate Wizard in MANUAL and VENT modes on full speed.
- Adjust the Climate Wizard damper until the pressure in the transition stabilises as follows:

CW-H10	240 Pa
CW-H15	215 Pa
- Proceed to balance the external duct and outlets in your usual manner.
- Check and if necessary re-adjust the Climate Wizard damper back to the above values.
- Lock the damper in its final position



Setting the Air Discharge Damper

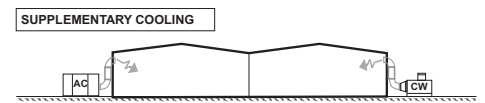
Air Balancing procedure for COLD FRONT Cooling:



- Connect all external ductwork to the Climate Wizard in preparation for balancing the system.
- Ensure main Air Conditioning plant fans are running at full speed - consult with Building Manager and/or Air Conditioning contractor.
- Start the Climate Wizard in MANUAL and VENT modes on full speed.
- Adjust the Climate Wizard damper until the pressure in the transition stabilises as follows:

CW-H10	240 Pa
CW-H15	215 Pa
- Proceed to balance the external duct and outlets in your usual manner.
- Check and if necessary re-adjust the Climate Wizard damper back to the above values.
- Lock the damper in its final position

Air Balancing procedure for SUPPLEMENTARY Cooling:



- Connect all external ductwork to the Climate Wizard in preparation for balancing the system.
- In case a duct is attached to the Climate Wizard discharge, set the louvres in desired position.
- Ensure main Air Conditioning plant fans are running at full speed - consult with Building Manager and/or Air Conditioning contractor.
- Start the Climate Wizard in MANUAL and VENT modes on full speed.
- Adjust the Climate Wizard damper until the pressure in the transition stabilises as follows:



CW-H10	240 Pa
CW-H15	215 Pa
- Proceed to balance the external duct and outlets in your usual manner.
- Check and if necessary re-adjust the Climate Wizard damper back to the above values.
- Lock the damper in its final position

Turning the Cooler on


TESTING THE COOLER

Once you are satisfied that the Cooler is installed and commissioned correctly, run it to ensure that everything is working as it should.



Turning cooler on, check fan operation

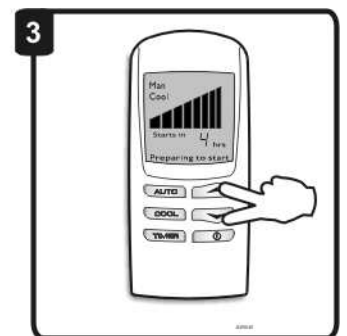
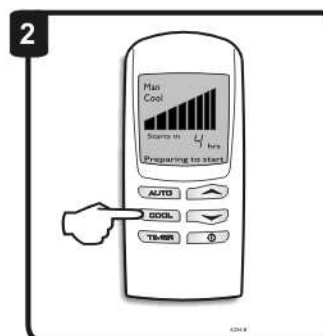
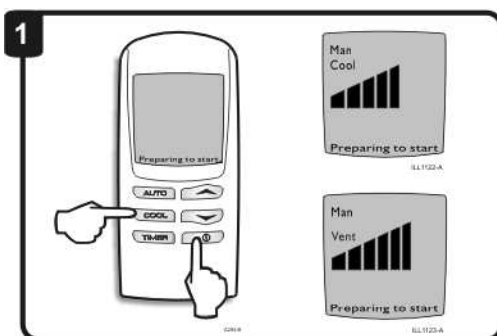
Press the  button to start the cooler. Press the  button to toggle between “Cool” and “Vent” on the display to switch the pumps on or off (Fig. 1). Vent mode disables the pumps. Check that the cooler runs quietly and with a balanced distribution of air to all outlets.

Check pump operation

Press the  button to toggle between “Cool” and “Vent” on the display to switch the pump on or off (Fig. 2). With control in “Cool” mode, check that there is water being pumped within the cooler. This is most easily done by observing the water turbulence in the vicinity of the pumps.

Check drain operation

Ensure there are no water leaks. Drain the reservoir by pressing both the  and  buttons together (Fig. 3), with the wall control in the “OFF” state. Check the drain fittings and pipes, making sure there are no leaks.



Clean up the site

Clean up and tidy the premises, removing all rubbish.



Show the customer their new cooler

Please take a few moments to explain to the customer the following, along with the principles of Indirect Evaporative Cooling:

- How much to open doors and windows.
- How to start the cooler.
- Explain the “Preparing to start” mode.
- How to operate the cooler “manually”.
- How to operate the cooler in “vent” mode only.
- How to operate the cooler in “auto” mode.
- How to drain the cooler.
- How to turn the power and water off.
- Maintenance requirements.



Wall Control

TURNING THE COOLER ON


The wall control can be switched on and off by pressing the  button. The wall control will remember the previous setting it was in when the cooler was last used.

PREPARING TO START


Whenever you select AUTO mode or COOL in MANUAL mode, the cooler will take a few minutes to start as it fills with water and saturates the cooling pads. The time will be decreased if the reservoir is full or the cooler has only recently been turned OFF.

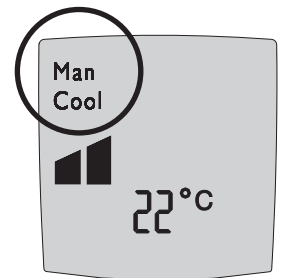
MANUAL MODE

With the wall control switched ON, press the  button until MAN is shown on the display.

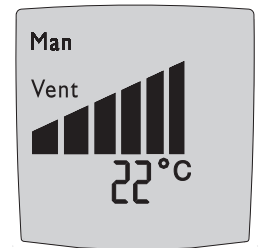
You may then press the  button to switch between COOL and VENT (VENT = fresh air being delivered but not cooled).

Once COOL or VENT has been selected, the wall control will maintain a constant fan speed. This is indicated by the bar graph shown on the display.

To increase or decrease the fan speed required, press either the  or  button.







ILL1122-A

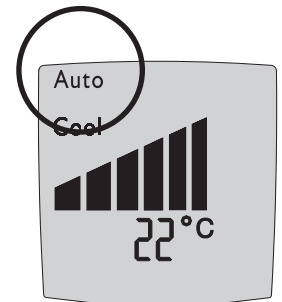


ILL1123-A

AUTO MODE

To select the AUTO mode press the  button until AUTO is shown on the display.

In AUTO mode the cooler will remember the last setting used and try to achieve this. It may vary depending on the day's conditions. Pressing  or  button will change the displayed 'room' temperature to a flashing 'setpoint' temperature. This 'setpoint' temperature can be adjusted by pressing the  or  buttons whilst the 'setpoint' temperature is being displayed.












ILL1124-A

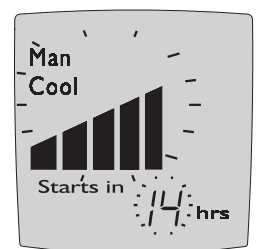
DELAYED START AND STOP

The cooler can be programmed to start at a specific time or stop at a specific time.

The delayed start time can only be programmed when the cooler is OFF. To program the cooler to start in a certain amount of hours use the following sequence:

Programming in manual mode





- (1)..... Press the  button.
- (2)..... Press the  button until "MAN" is displayed on the screen.
- (3)..... Press the  or  button until the desired fan speed is displayed by the bars in the middle of the screen.
- (4)..... Press the  button to set either COOL or VENT.
- (5)..... Press the  button and the 'starts in' time will start flashing. Use the  and  buttons to select the desired time.
- (6)..... Press  again.

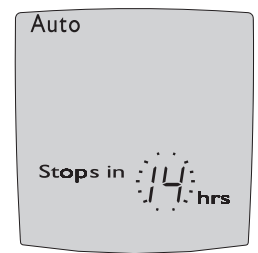


ILL1118-A

Wall Control



Programming in auto mode

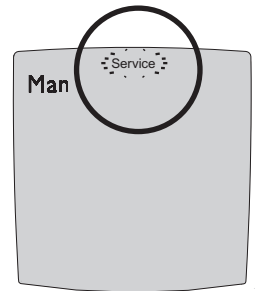
- (1)..... Press the **TIMER** button.
- (2)..... Press the **AUTO** button until flashing AUTO and set temperature are displayed.
Press the  or  button until the desired temperature is displayed on the Screen.
- (3)..... Press the **TIMER** button and the 'starts in' time will start flashing. Use the  or  button to select the hour.
- (4)..... Press **TIMER** again.



ILL1119-A

The delayed stop time can only be programmed when the cooler is ON. To program the delayed time in which you want the cooler to stop use the following sequence:

- (1).....Select the **TIMER** button and the 'stops in' time will start flashing.
Use the  and  buttons to select the desired off time.
- (2)..... Press **TIMER** again.




ILL1120-A

NOTE: Delayed start and stop times must be re-set **every day** that they are required.

SERVICE MODE

When a fault has been recognised by the wall control the word "Service" flashes on the screen. When "Service" is displayed it maybe necessary for you to contact your Service Agent. However, before doing so, turn the wall control OFF. You will notice a number flashing at the bottom of the screen. This number indicates the code for the fault that has occurred.

Please write this number down, then push the  button to turn the cooler back on. If after a short time "Service" is again shown on the display, turn the wall control OFF and check if the flashing number is the same. If it is, check the following possible problems. However, we do recommend that any checks be carried out by an authorised dealer or service agent.

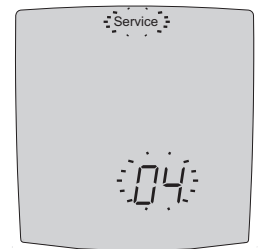
If '02' or '03' is displayed

- (1).....Check that your local water authority has not temporarily disconnected the water in your area.
- (2).....Check that the water supply tap to the cooler is turned on.

If '04' is displayed

- (1).....Check that the drain is not blocked.



If these do not fix the problem then contact your Service Agent. You will need to quote the flashing number that you wrote down.



ILL1121-A

DRAIN MODE

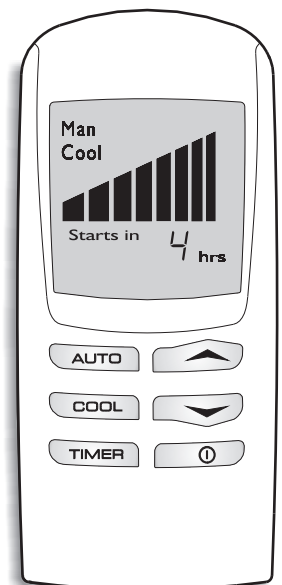
(Cooler switched OFF)

Pressing the  and  buttons at the same time for 2 seconds will open the drain valve and empty the water in the reservoir. The wall control will display "dr" on the screen. Draining the water will leave the reservoir clean and dry until it is next used. This function is not mandatory because the water will be drained from the reservoir automatically after a pre-set time delay, in order to keep the cooler healthy and dry until it is used again next time.

POWER OUTAGES

If the power supply fails for less than 5 seconds the cooler will retain its current settings. That is, it will stop for the time the power is off but resume operation when the power comes back on again.

If the power fails for more than 5 seconds the cooler will automatically turn itself off. According to the chosen parameter (A7), if value 00 is set, when power comes back on, the cooler will not resume operation. You will have to re-start it at the wall control. If parameter 01 is set, the cooler will re-start again when power is restored.

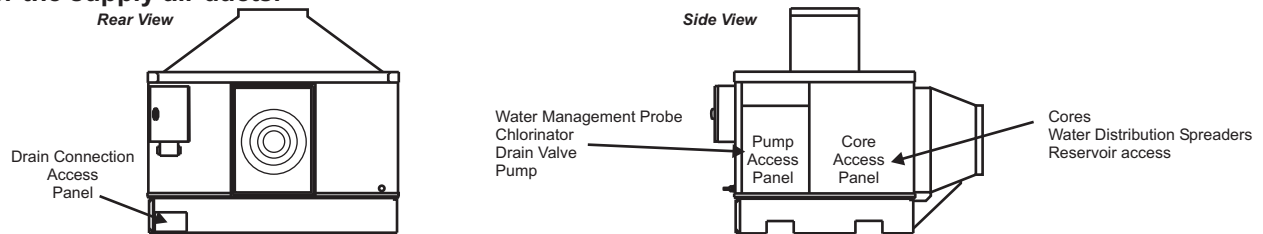


A294-B

Seasonal Procedures

NOTE! All maintenance must be done by a trained, licensed technician. Some activities **may require 2 persons** to comply with local Health and Safety regulations. Maintenance activities details are described in the following pages.

The heat exchanger cores are unique to Climate Wizard and have been manufactured to give the highest possible cooling performance. **WHEN REPLACING CORES DO NOT USE ALTERNATIVES.** The manufacturer is not responsible for the performance, damage to, or safety of the cooler if any form of alternate cores are used. Using any other type of core will seriously affect the cooler's performance and may cause water carry-over that can enter the supply air ducts.



End-season Maintenance

1. If not already drained, initiate a Drain sequence, "dr" is displayed on the wall control (refer Pg. 20). The reservoir will drain and the cooler will shut down. Allow sufficient time to let water drain from the cooler cores and tank.
2. Turn off the power supply to the cooler.
3. Remove the cooler lid (refer Pg. 24).
4. Remove the core and pump access panels (refer Pg. 24).
5. Inspect the cores for salt build-up, dirt, algae and general cleanliness. Fit new cores if necessary (refer Pg. 24). (If in doubt, contact Seeley International Service for advice.)
6. Clean the Water Level probes by gently wiping the contact surfaces with a soft cloth. Make sure the probe is returned to the correct height (as set ex factory) to ensure proper water level control. Check that the probe is fully pressed down into its mounting bracket (refer Pg. 22).
7. Remove the pump from the cooler and clean the filter section. This also provides clear access to clean the Chlorinator (refer Pg. 22).
8. Clean the Chlorinator blades by gently wiping the contact surfaces with a soft brush or cloth. Be sure to clean the inner surfaces of the chlorinator blades (refer Pg. 22).
9. Refit the pump and chlorinator assembly back into the reservoir.
10. Clean/replace the inlet air filters (if fitted) to remove any foreign matter captured during the operating period. Inspect the filter material, if the filters are significantly discoloured, choked or blocked, then they must be replaced.
11. Turn off the water supply. Make sure no water is left in the reservoir. Leave pipe drained for winter to prevent freezing and splitting. If necessary, winterise the cooler to ensure no water can be locked in any pipes under pressure.
12. Clean the bottom reservoir thoroughly using a wet cloth or brush. Flush with minimal water to remove any remaining residue (refer Pg. 23).
13. Refit the core and drain access panels back on the cooler.
14. Cover the cooler for winter if desired. (No covers are available from the manufacturer.)

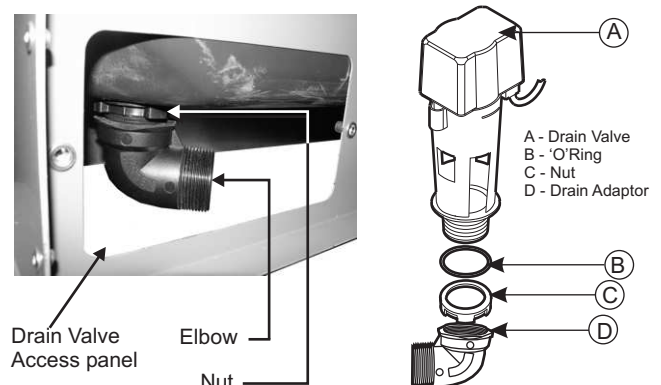
Pre-season Commissioning:

1. Remove the pump access panels.
2. Turn on the power and water supply.
3. Turn on the cooler via the Wall Control or BMS and run the cooler according to the previous instructions under "Operation of Cooler".
4. Check that water is flowing into the cooler reservoir and that it stops flowing when it reaches the top probe. (A torch will be needed for this check.)
5. Fit the pump access panels back onto the cooler.

Replacing the Drain Valve

If servicing the drain valve, re-assemble drain valve as shown. Access the drain valve via the Pump Access panel on the control box side of the cooler.

Make sure that the O-ring (B) is fitted to the drain valve thread before replacing the valve back into the reservoir. Screw the nut up tightly by hand through the drain valve access panel. Do not overtighten the nut. Fit the drain elbow to the drain valve thread. Re-connect the drain plumbing to the elbow. Now run the drain valve cable through to the control box.

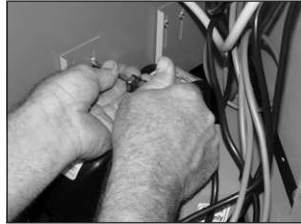


Cleaning Pump Strainers & Impellers

1. Open the pump access panel (either side) to expose the pump enclosure.
2. Cut the cable tie securing the pump lead.
3. Remove the 2 screws securing the pump bracket to the wall of the cooler.
4. Disconnect the plumbing hose from the spigot at the pump base. Remove the entire pump/chlorinator assembly from the cooler cabinet. To remove pump from the strainer, press the release button on the strainer, twist the pump body clock-wise with button depressed, lift the pump body out of the strainer base.
5. Inspect and clean the pump strainer and impellor housing. Remove any solids or residues from the strainer slots or around the impellor with a soft brush.
6. Re-assemble in the reverse order, use a new cable tie to tidy and secure all the cables again.



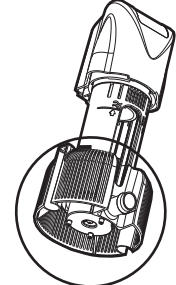
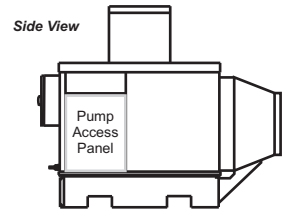
Cut the cable tie



Remove the 2 screws



Remove the entire pump/chlorinator assembly

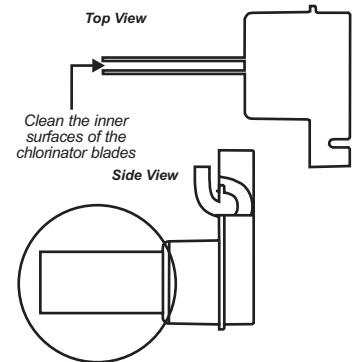


Clean the pump strainer and impellor housing.

Cleaning or replacing the Chlorinator

Clean the chlorinator blades by gently wiping the contact surfaces with a soft brush, cloth or non-abrasive wooden or plastic implement. Be sure to clean the inner surfaces of the chlorinator blades. **Do not scratch or damage the metallic surfaces of the chlorinator.** To replace the chlorinator, follow the directions above to remove the pump and chlorinator assembly.

1. Unplug the chlorinator lead from the main PCB, (refer to the wiring diagram adhered to the control box door for the plug point location) remove the lead from the cable gland at the base of the control box, pull the lead through the rubber gland mounted below the control box from the access panel opening.
2. Remove the pump and chlorinator assembly from the cooler. Unclip the chlorinator from the pump bracket and refit the new chlorinator.
3. Refit the pump and chlorinator assembly back into the cooler following the reverse order as above.



Clean the inner surfaces of the chlorinator blades

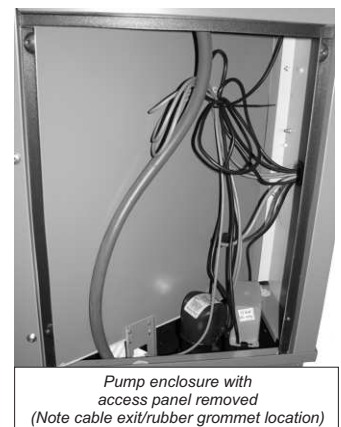
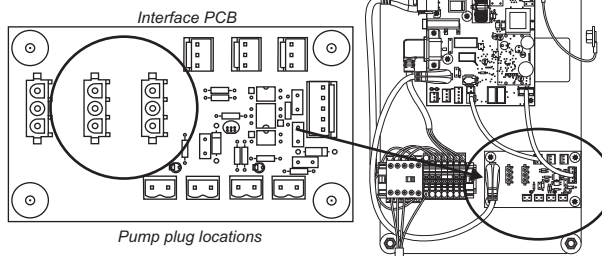
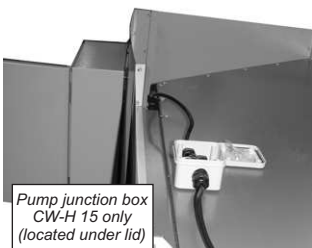
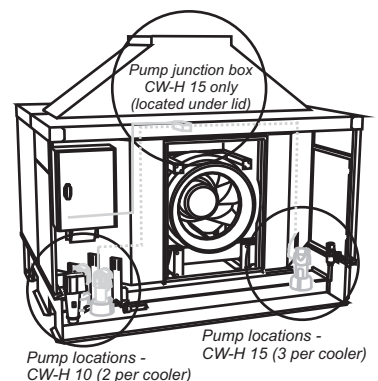
Changing Pumps

For 2 & 3 core coolers

1. Open the pump access panel (either side) to expose the pump enclosure. Cut the cable tie securing the pump lead.
2. Remove the 2 screws securing the pump bracket to the inner wall of the cooler.
3. Disconnect the plumbing hose from the spigot at the pump base. Remove the entire pump/chlorinator assembly from the cooler cabinet. Unscrew the 2 screws securing the pump to the bracket.
4. Unplug the pump from the control box (interface) PCB (refer to the wiring diagram adhered to the control box door for the plug point location). Release the cable gland from the pump lead at the base of the control box. Pull the pump lead through the rubber grommet located in the wall of the cooler below the control box.
5. Re-assemble in the reverse order, use a new cable tie to tidy and secure all the cables again.

For 3 core coolers

2 of the pumps are connected in parallel via a junction box mounted below the cooler lid. Should one of these pumps fail, it is necessary to remove the lid assembly to access the junction box to release the failed pump's lead.

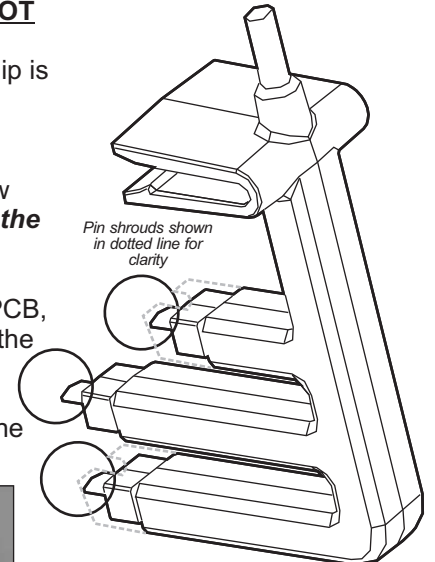
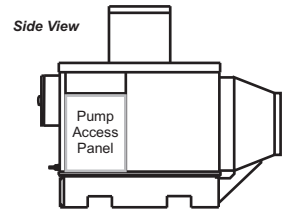


Cleaning or replacing the Water Management Probe

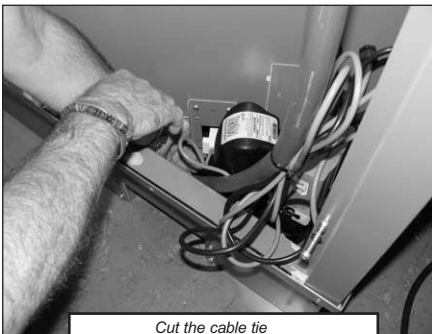
1. To access the water management probe, open the pump access panel. Cut the cable tie securing the lead to the pump hose.
2. Unclip the water management probe from the bracket, pull the lead through the opening in the bracket and pull the probe out from the enclosure (There is sufficient lead length to clear the pump enclosure). Remove the small plastic shrouds from the first and third pins.
3. Clean the water level probes by wiping the contact surfaces with a soft cloth - do **NOT** use abrasives.
4. Refit the shrouds over pins 1 & 3. Refit the probe to the bracket, making sure the clip is fully engaged (the clip makes a "click" sound when properly engaged).

To remove and replace the water management probe,

1. Remove the 3 screws securing the bracket to the cooler side wall. The centre screw fixes the height for the bracket mount and has been factory set. **Be sure to return the bracket to the same mount height position for proper control of water levels within the cooler.**
2. Unclip the probe from the mounting bracket, unplug the probe lead from the main PCB, (refer to the wiring diagram adhered to the control box door) remove the lead from the cable gland at the base of the control box, pull the lead through the rubber gland mounted below the control box from the access panel opening.
3. Refit the assembly back into the cooler. Use a new cable tie to tidy and secure all the cables again and re-assemble following the reverse order as above.



Clean the water level probes by wiping the contact surfaces with a soft cloth.



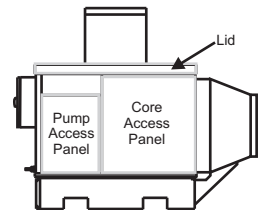
Cut the cable tie
Unclip the Water Management Probe



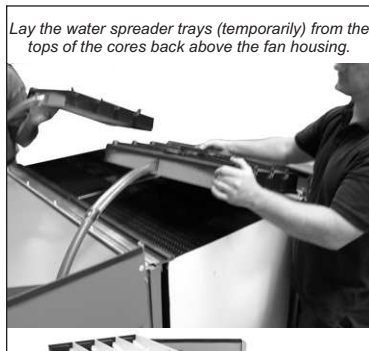
Pull the lead through the opening in the bracket

Cleaning the Reservoir (Tank)

1. To access the reservoir; the Lid, Pump and Core access panels must be removed.
2. Remove the water spreader assemblies (refer Pg. 24).
3. Remove the cores to expose the core base grate.
4. Remove the core grate to gain access into the reservoir under the core location.
5. Remove the pump access panels to access the reservoir in these areas. Clean the bottom reservoir thoroughly using a wet cloth or brush. Flush with minimal water to remove any remaining residue.



Remove the access panels



Lay the water spreader trays (temporarily) from the tops of the cores back above the fan housing.



Remove the cores



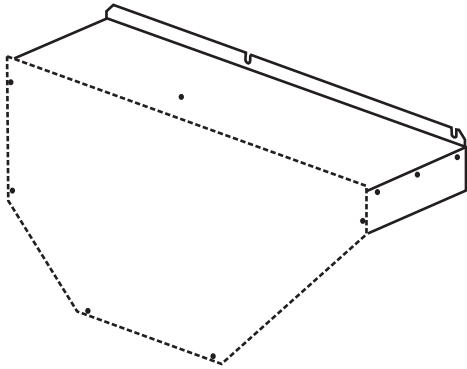
Remove the core grate to gain access

Replacing the Inlet Air Filters

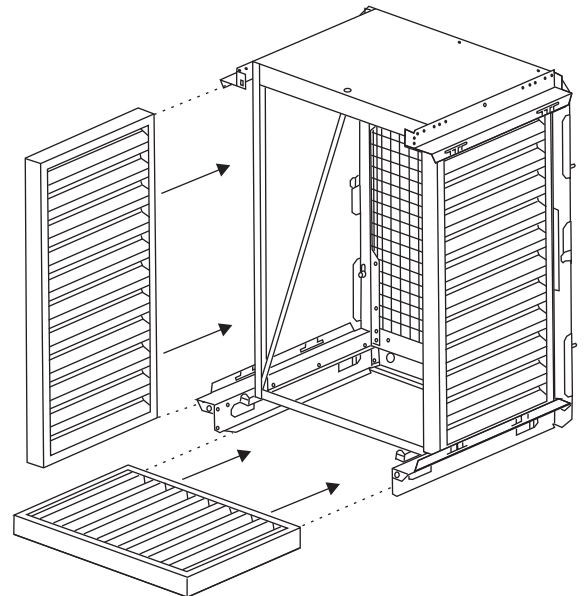
When servicing the filters the front plate of the filter cowl must be removed to provide access. To fit the filters into the Air Filter frame, slide the bottom filter into position into the base of the frame. Slide the side filter(s) into the frame in the same manner. To fit the front filter, locate the top edge of the filter under the top brackets and lift to engage the filter inside them. Allow the filter to drop, to engage the 2 bottom brackets at the bottom of the frame.

The Air Filters should be replaced as soon as airflow through the filters is restricted by choking or clogging with dust or contaminants. The frequency of changing the filter is dependant on the air quality in situ.

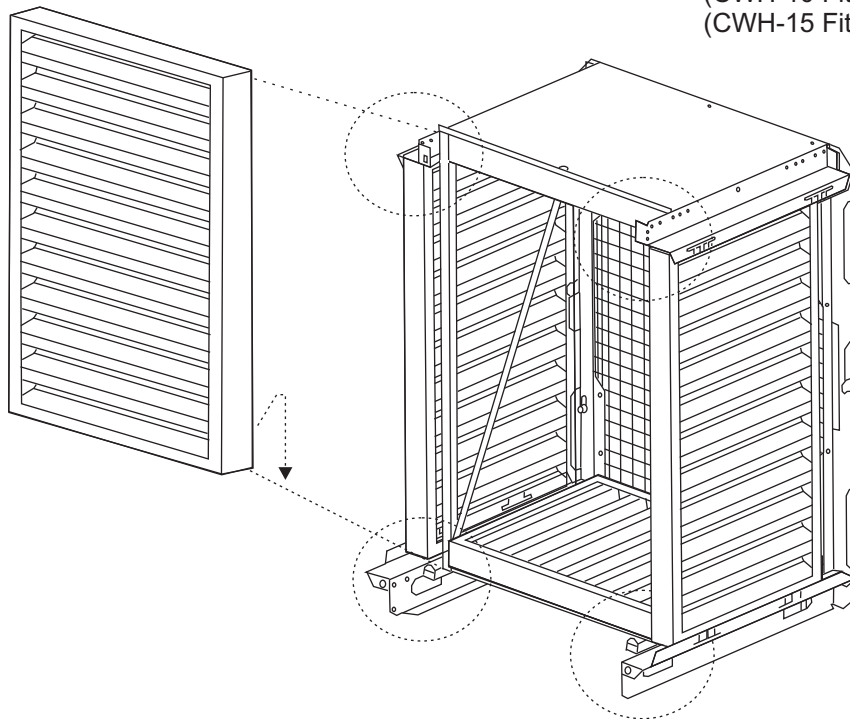
Replacement Inlet Air Filters are available from SI Service Agents and Climate Wizard distributors. Refer to Page 5 for Replacement Part information.



Remove screws to dismantle the front section of the filter cowl, the lid and sides of the cowl remain attached to the cooler.



Filters slide into frame channels
(CWH-10 Fit 3 Filters only, omit LH side)
(CWH-15 Fit 4 Filters)



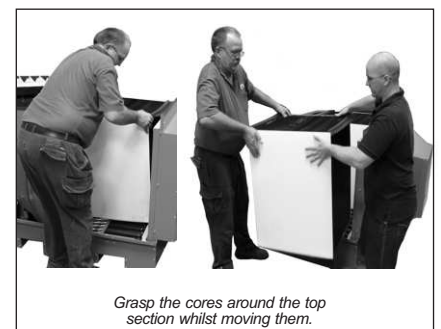
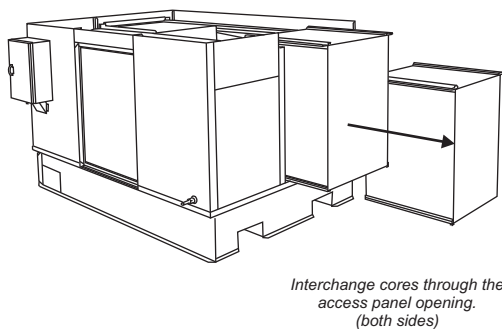
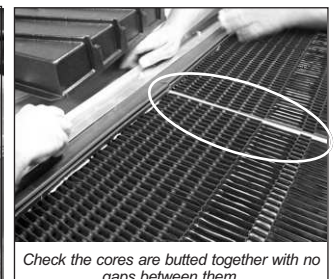
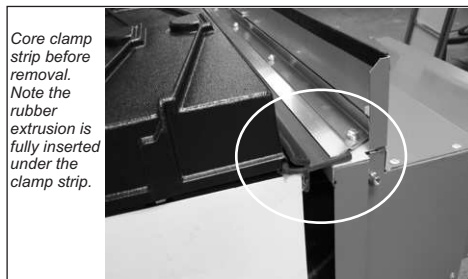
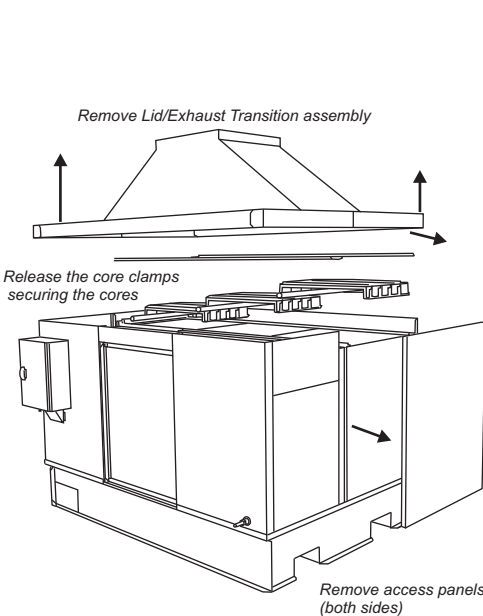
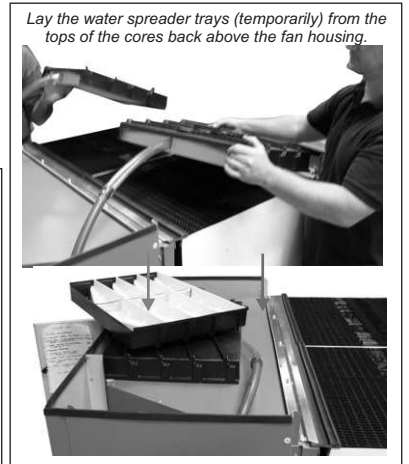
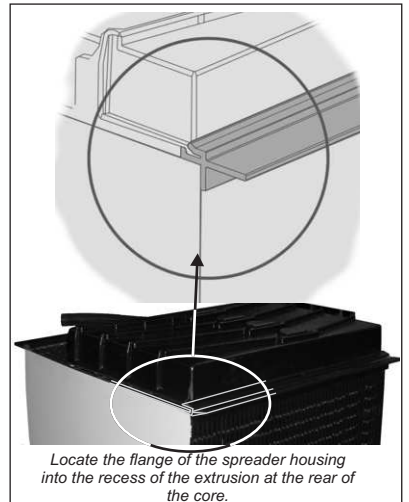
To fit the front filter, locate the top edge of the filter under the top brackets and lift to engage the filter inside them. Allow the filter to drop, to engage the 2 bottom brackets at the bottom of the frame.

Inspecting and changing cores

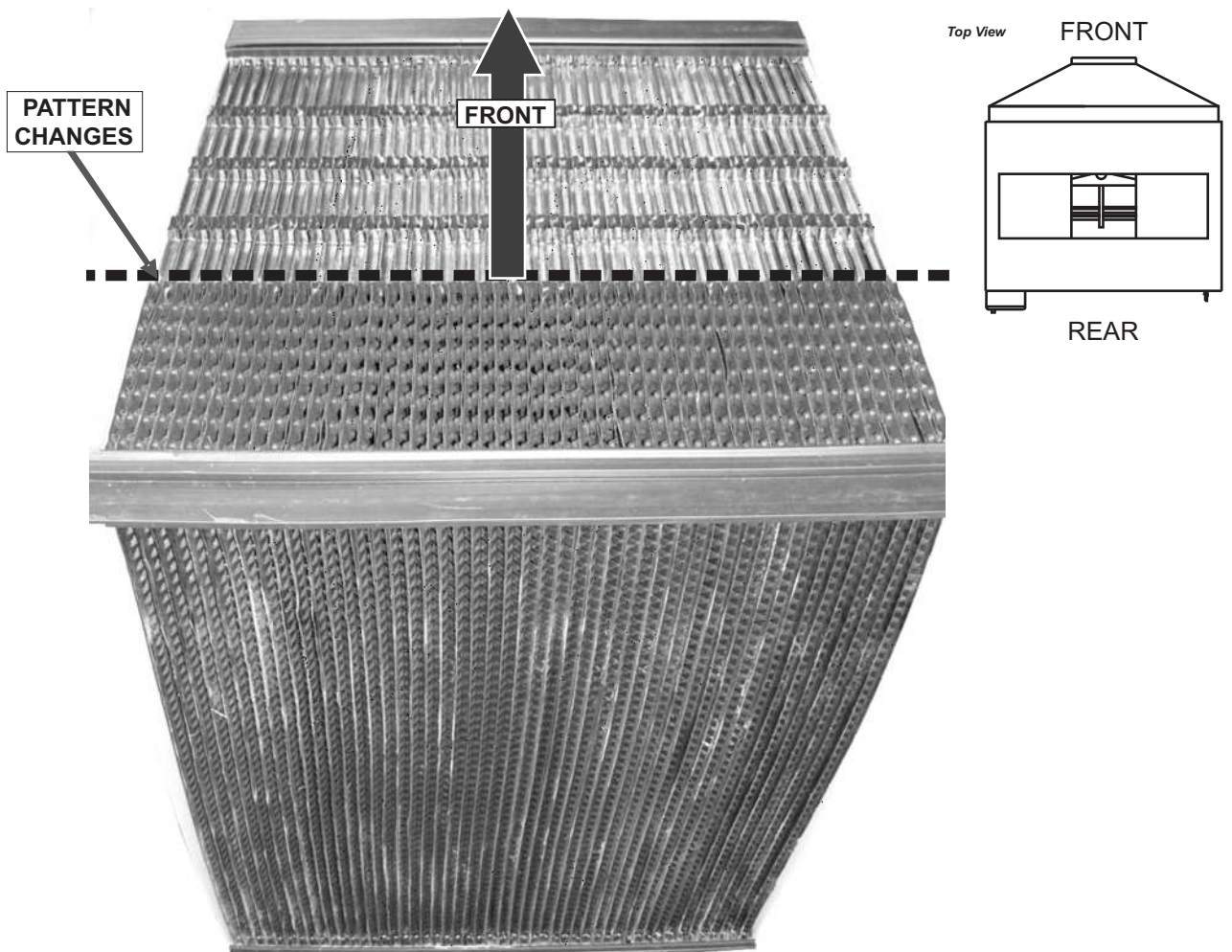
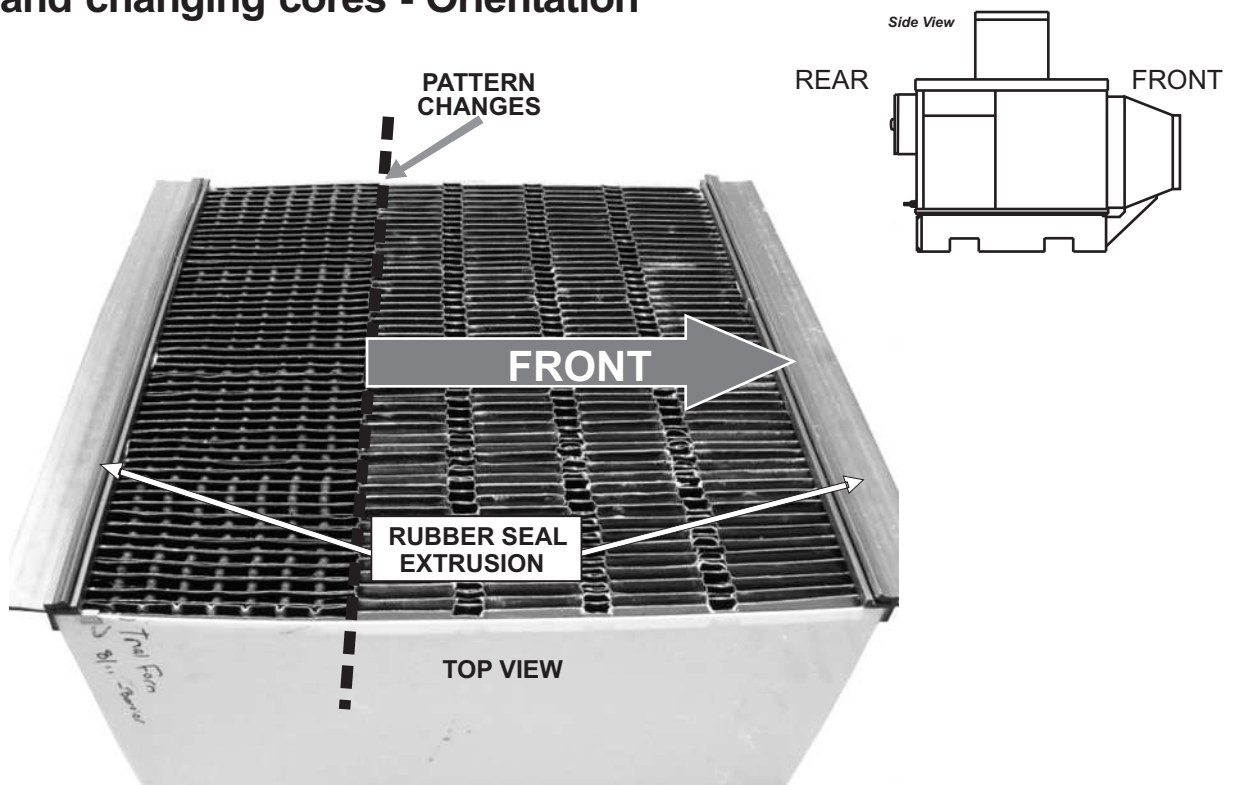
1. Power OFF, water OFF
2. Disconnect and remove any fixed ducting from the exhaust outlet of the cooler (if fitted).
3. Remove the exhaust transition/lid assembly from the cooler.
4. Open the core access panels on either side of the cooler.
5. Remove the metal core clamp strips
6. Disconnect the spreader assembly from the rubber core extrusions and remove the water spreader assemblies. They can be placed aside onto the lid of the cooler cabinet whilst still remaining connected to the plumbing system.
7. The cores can now be slid out from either side of the cooler through the access panel openings.

Take care to ensure the cores are not damaged during removal. They can be heavy and fragile when wet. (If wet, run the cooler on vent for a period of time before removing.) Grasp the cores around the top section to ensure no delamination of the core occurs whilst moving them.

8. To re-assemble, position the cores into the cooler starting at the centre. For all cores the front of the core must face the cooled air outlet of the cooler (see adjacent pic. & Pg. 25 for orientation guide)
9. Locate the water spreader assembly front flange into the extrusion at top front of the cores.
10. Check the cores fit snugly and squarely across the width of the core platform and are firmly butted together. Check for a uniform gap at either side of the cooler between the side walls and the core. The core access door has a seal to take up any resultant gap.
11. Refit the core clamp strips clamping over the extrusion located at the top of the cores.
12. Ensure a good seal between the cores and the access door when closing. When re-securing the access doors, start from the bottom screws and work up.
13. Refit the exhaust transition/lid assembly to the cooler.
14. Refit any fixed ducting to the exhaust outlet of the cooler.
15. Turn water and power back on to the cooler.

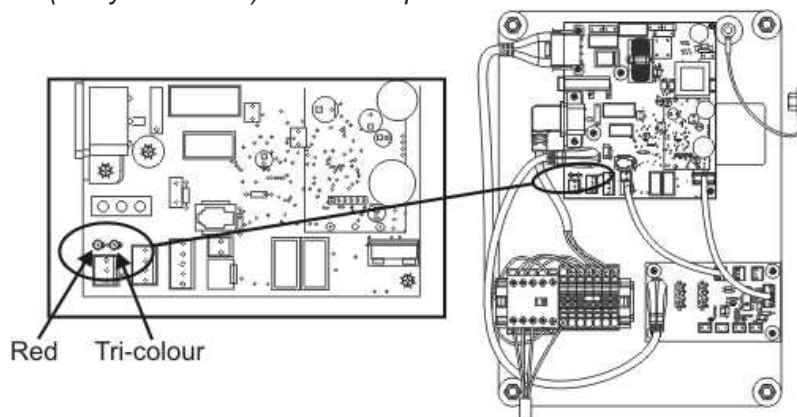


Inspecting and changing cores - Orientation



LED Indicator - Operating and Fault Code Diagnosis

The Red LED (left-hand LED) is used to indicate the condition of water salinity and configuration of the water management system. Tri-Colour LED (right-hand LED) is used as an operational and fault indicator. *NOTE: Tri-colour LED double flashing Green (every 2 seconds) = Normal Operation*



RED COLOURED LED: *This LED indicates the status of the conductivity measurement circuit and the status of the Salinity Control Method*

1 Flash then 2 seconds OFF	Salinity Control Method = Water Manager,	<i>Measured conductivity is below the conductivity set point</i>
2 Flashes then 2 seconds OFF	Salinity Control Method = Water Manager,	<i>Measured conductivity is above the conductivity set point</i>
3 Flashes then 2 seconds OFF	Salinity Control Method = Standard (8 counts of re-fill to high probe)	
Continuously ON		<i>Lower probes are open circuit or conductivity is less than 9uS/cm.</i>

TRI-COLOUR LED: *This LED indicates the status of the cooler and indicates Fault Codes (if applicable)*

2 Green flashes then 2 seconds OFF	NORMAL OPERATION	<i>The main program loop is running, no Fault present</i>	NORMAL OPERATION
1 Red Flash then 2 seconds OFF	COMMUNICATION FAILURE	<i>Wall Control: No valid message for 10 seconds. System shuts down.</i>	FAULT CODE #1
2 Red Flashes then 2 seconds OFF	FAILURE TO DETECT WATER AT LOW PROBE	<i>Water has 20 minutes to reach the LOW probe when the solenoid valve is on. If it fails to do so, this Fault is activated.</i>	FAULT CODE #2
3 Red Flashes then 2 seconds OFF	FAILURE TO DETECT WATER AT HIGH PROBE	<i>Once water has reached the LOW probe, water has 20 Minutes to reach the HIGH probe. If it fails to do so, this Fault is activated.</i>	FAULT CODE #3
4 Red Flashes then 2 seconds OFF	FAILURE TO CLEAR LOW PROBES DURING DRAIN	<i>When the drain has opened water has 20 minutes to clear the LOW probe. If it fails to do so, this Fault is activated. This will occur after a timed Drain delay when the Pump has been switched off, or during a Salinity Drain</i>	FAULT CODE #4
5 Red Flashes then 2 seconds OFF	WATER DETECTED AT HIGH PROBE BUT NOT AT LOW	<i>Low probe dirty or faulty</i>	FAULT CODE #5
6 Red Flashes then 2 seconds OFF	FAILURE TO CLEAR HIGH PROBE	<i>If after 4 hours of pump running water has not cleared the HIGH probe (i.e. pumps not working), this Fault is activated.</i>	FAULT CODE #6
7 Red Flashes then 2 seconds OFF	MOTOR ERROR	<i>If an Error has occurred in the motor drive circuit.</i>	FAULT CODE #7
	WARM START	<i>If the mains input voltage is under 90Vac but not low enough to reset the PCB, the system switches off the Fan and Pump and indicates this Fault. If the Voltage returns to a usable voltage level without resetting the PCB a Fault Code #8 is recorded in the system log.</i>	FAULT CODE #8
10 Red Flashes then 2 seconds OFF	CHLORINATOR FAULT.	<i>The Chlorinator is Short Circuit, Open Circuit or running in very high salinity water > 13,000uS. Any of these faults will initiate Fault Code #A. "SERVICE" will be displayed on the Wall Control and Fault Code #A will be indicated on interrogation. The first Fault Code #A will trigger a Salinity Drain cycle. If after the Salinity Drain cycle another Fault Code #A occurs, within 15 minutes, the cooler will be disabled until remedial action is taken.</i>	FAULT CODE 'A'
11 Red Flashes then 2 seconds OFF	SMART CARD ERROR	<i>The Smart Card is missing or corrupted.</i>	FAULT CODE 'B'

TROUBLE SHOOTING

NOTE: MANY OF THESE CHECKS AND REMEDIES CAN ONLY BE CARRIED OUT BY SERVICE TECHNICIANS.

PROBLEM	PROBABLE CAUSE	SUGGESTED REMEDY
Inadequate Cooling	Under-sized cooler.	Replace with larger cooler.
	Under-sized ducts.	Replace with larger ducts.
	Clogged or dirty cooling core.	Clean or replace core.
	Dirty inlet air filter	Clean or replace filter.
	Dry cores or lack of water while cooler is operating.	Check water distribution system for possible obstruction in hoses. Check pump.
	Insufficient air discharge openings or inadequate exhaust from building, causing high humidity and discomfort.	Make sure there is adequate provision for exhausting stale air from building (open windows and doors).
	Balancing damper out of position	Re-position damper and lock
	Excessive resistance from poorly located backdraft damper.	Remove backdraft damper and substitute manual slide damper.
	Excessive ambient humidity (see also item above re inadequate exhaust).	On days during summer when ambient humidity is high the cooler will not reduce the temperature as much as on drier days. There is no remedy.
Noisy cooler.	Fan out of balance due to dirt. etc.	Clean the fan.
	Air distribution system creating too much back pressure, or changes of direction too sudden, or grilles too small.	Have contractor re-evaluate his design; use bends instead of elbows; change grille sizes.
Pump fails to operate.	Pump motor failure.	Replace pump.
Fan fails to start.	Main power circuit breaker tripped or fuse blown.	Check cause of overload. Reset circuit breaker or replace fuse. Adjust motor amp setting if necessary.
	Fan motor burned out.	Replace motor.
	Low system voltage.	Consult with power supply authority.
	Check fault condition via the tri-colour LED on electronic module.	Rectify fault as indicated and restart the cooler. (Refer Pg. 26)
	Wall Control failed.	Replace wall control.
	If the wall or remote control is in AUTO or AUTO TIMER mode and no fan bars are displayed the fan will not start.	Switch to MANUAL mode to check the fan operation.
Pump runs but no water circulation. Pump runs but pads lack water.	Insufficient water in reservoir.	Check probe cable plugged in fully, clean probes
	Water hoses blocked.	Check and clean out blockage.
	Pump strainer blocked.	Clean pump strainer.
Continuous overflow of water.	Water Management probes adjustment not correct.	Check probe cable plugged in fully, clean probes
	Heavy core deposits.	Clean or replace cores.
Water being blown into the building.	Auto Drain Valve malfunctioning	Check and remedy function.
	Loose water hose connections.	Tighten all connections.
	Water hose broken.	Replace any cracked or broken hoses.
Unpleasant odour.	New cooler core.	Drain reservoir, refill, run pump for a while.
	Cooler located near source of unpleasant odour.	Remove source of odour or relocate cooler.
	Algae in reservoir water.	Drain reservoir, clean thoroughly with strong cleansing agent, refill, change cores.
	Cores remain wet after shut down.	Run fan on "vent" for 3 hours after cooling cycle to dry cores out.
	Heavy core deposits.	Replace cores.
Cooler cycles ON and OFF.	Fault in the cooler.	Contact your Service Agent.

INSTALLATION CHECKLIST

Owners Name: _____

The cooler is adequately supported, secure and level.

Telephone: _____

The water pipes were flushed of any foreign materials before connection to the cooler was made.

Address: _____

The water is connected with no leaks at fittings.

Water pipes are correctly saddled as per the applicable plumbing regulations.

Dealer: _____

The owner has been instructed on how to isolate the water to the system in case of emergency.

Installer: _____

The drain water does not discharge onto the roof surface.

Date Installed: _____

The power supply adheres to all local and national regulations and is wired back to the distribution board on its own separate circuit.

Model No.: _____

Serial No.: _____

All cables have been correctly connected to the control boxes (i.e. power supply, control cable)

The owner has been instructed how they can electrically isolate the cooler at the meter box in case of an emergency.

All ducts are fixed correctly and there are no air leaks.

The system has been run from the customers wall control and all functions work correctly.

The air balance for all outlets has been adjusted to the customers satisfaction.

The customer has been shown how to operate the system.

All the installation rubbish has been removed and, if applicable, any property damage repaired.

Signed by Installer:

Dated:

INSTALLER FEEDBACK

TO THE INSTALLER

Seeley International Pty Ltd is committed to continuous improvement. This includes all facets of our business. If you would like to be part of this ongoing commitment by expressing your thoughts on how we can improve this installation manual, or how we can improve the product or its installation, we'd be more than pleased to receive them.

The empty space (below) is **your area** to complete as you like. Simply forward it to any Sales Office of Seeley International Pty Ltd or mail it direct to:

Seeley International Pty Ltd,
PO Box 164,
Lonsdale, South Australia, 5160
A.C.N. No. 054 687 035

Attention: Sales Manager,
Seeley International



CLIMATEWIZARD



Warranty Service

Australia **1-300-650-644**

USA Toll Free: **1-800-926-6824**

All other regions: Please contact your local Climate Wizard distributor.

As the policy of the Company is one of continuous product improvement, specifications are subject to change without notice.