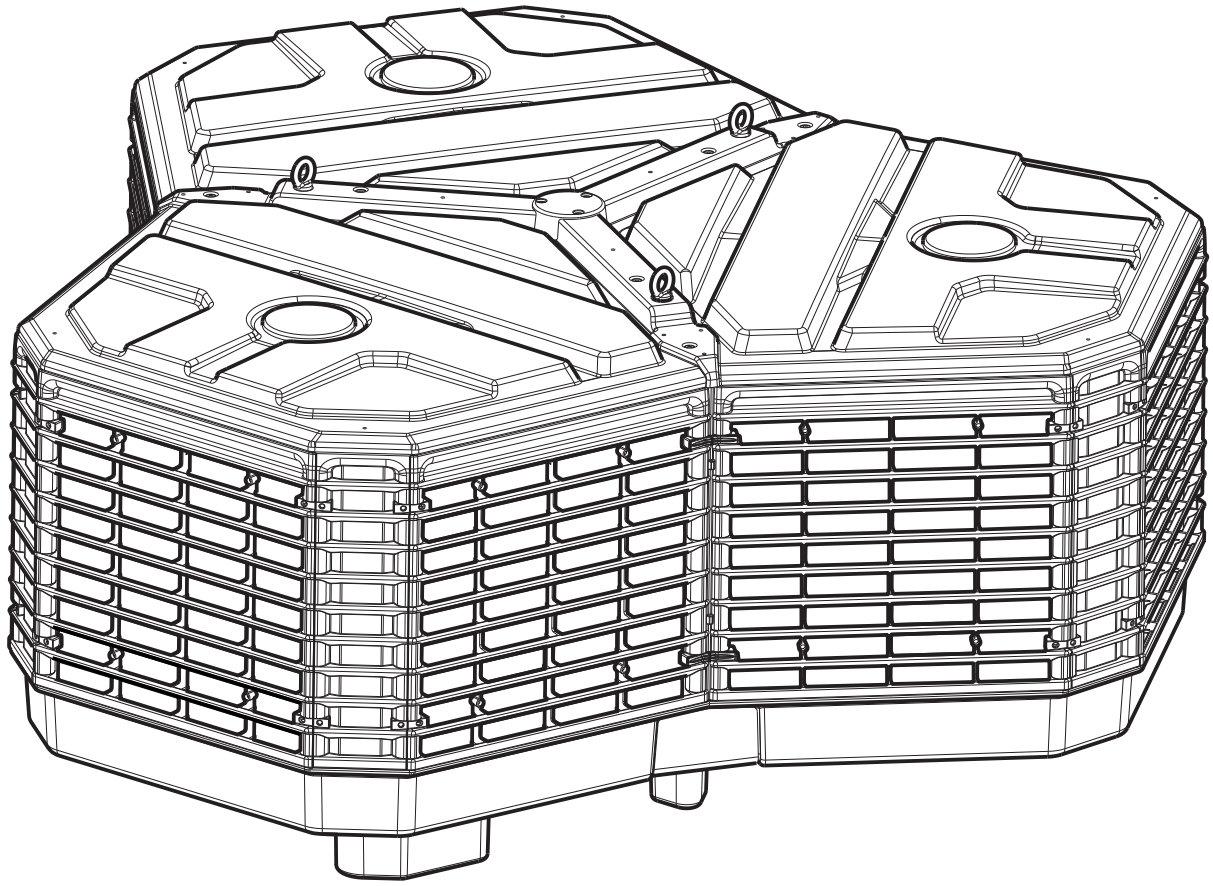
SEELEY INTERNATIONAL

INSTALLATION, OPERATION & MAINTENANCE

Enviromagic

Commercial / Industrial Evaporative Cooler



(English) (ENV)

Breezair®

NUMBER ONE IN NATURAL COOLING

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SAFETY

READ AND SAVE THESE INSTRUCTIONS

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 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.

WARNING - TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY TO OTHER PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
2. Before servicing or cleaning the unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag to the service panel.
3. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
4. When cutting or drilling into walls or ceilings, do not damage electrical wiring and other hidden utilities.
5. Ducted fans must always be vented to the outdoors.
6. Do not use this fan with any solid-state speed control device.

Seeley International provides the following information as a guide to contractors and employees to assist in minimizing 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 minimize 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:

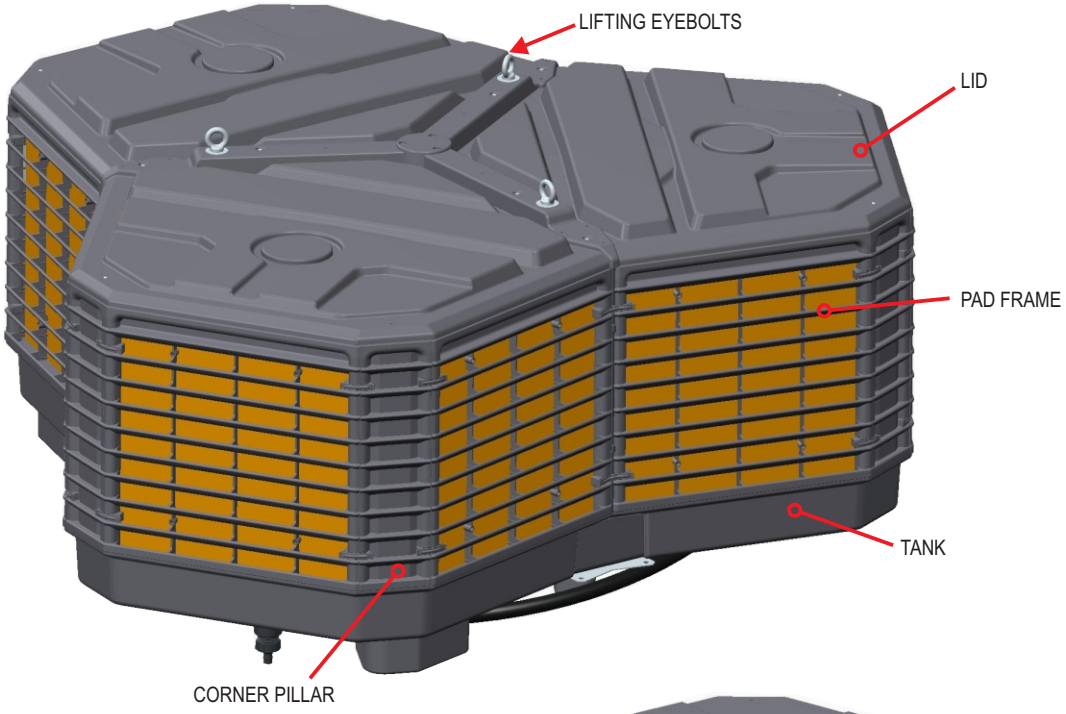
- What is the best and safest access to the roof and working areas?
- If a worker is alone, who knows they are there and if they get into difficulty, how can they summon help? (Call some one on the ground? Mobile phone? etc.)
- What condition is the roof in? Should the trusses, underside or surface be 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 i.e. excessive roof pitch, limited ground area, fragile roof, electrical power lines?

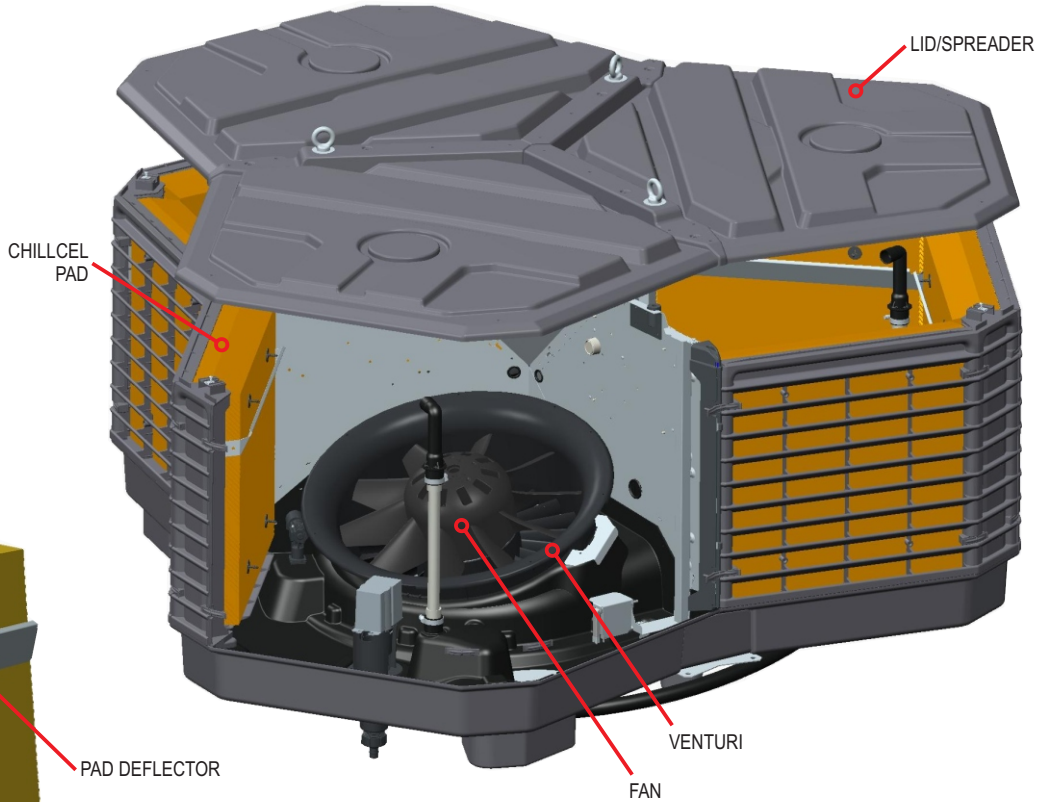
OTHER IMPORTANT REQUIREMENTS

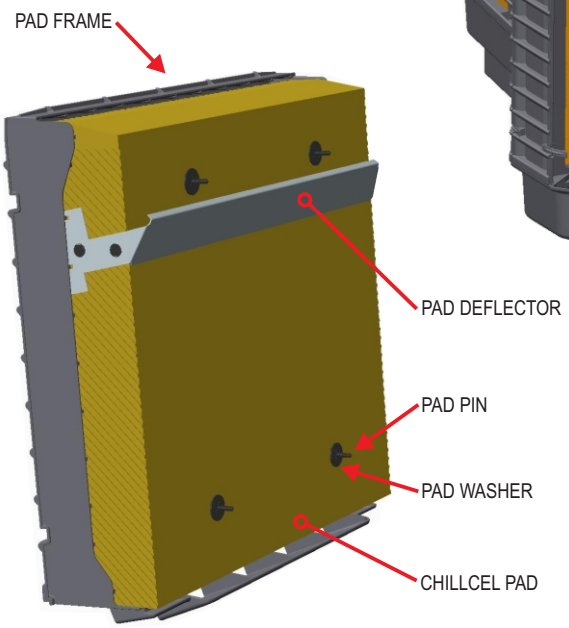
- Never force parts to fit because all parts are designed to fit together easily without undue force.
- Never drill any holes in the primary base surface or side walls of the bottom tank (reservoir) of the cooler.
- Check the proposed cooler location, to ensure that it is structurally capable of supporting 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.

COOLER VIEWS



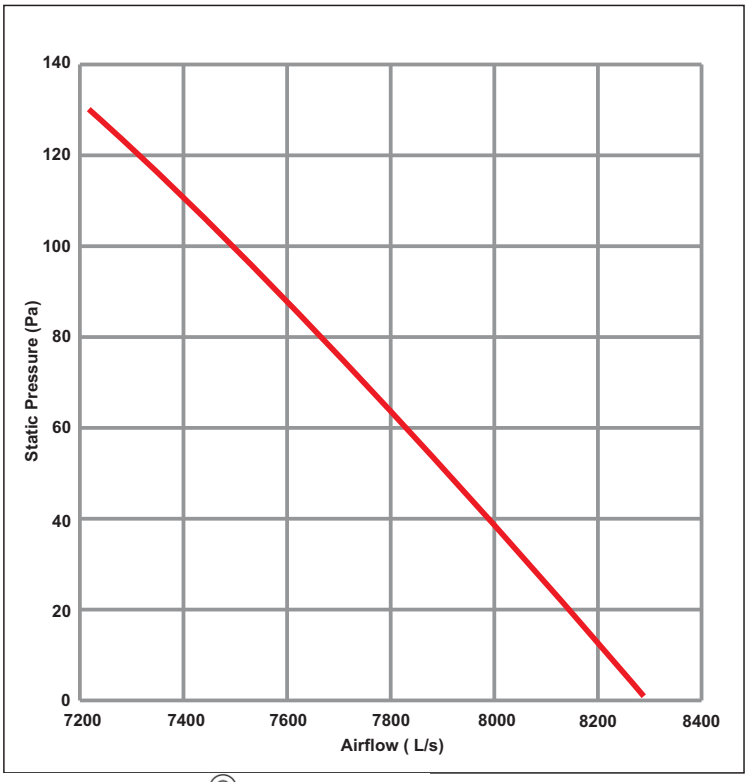


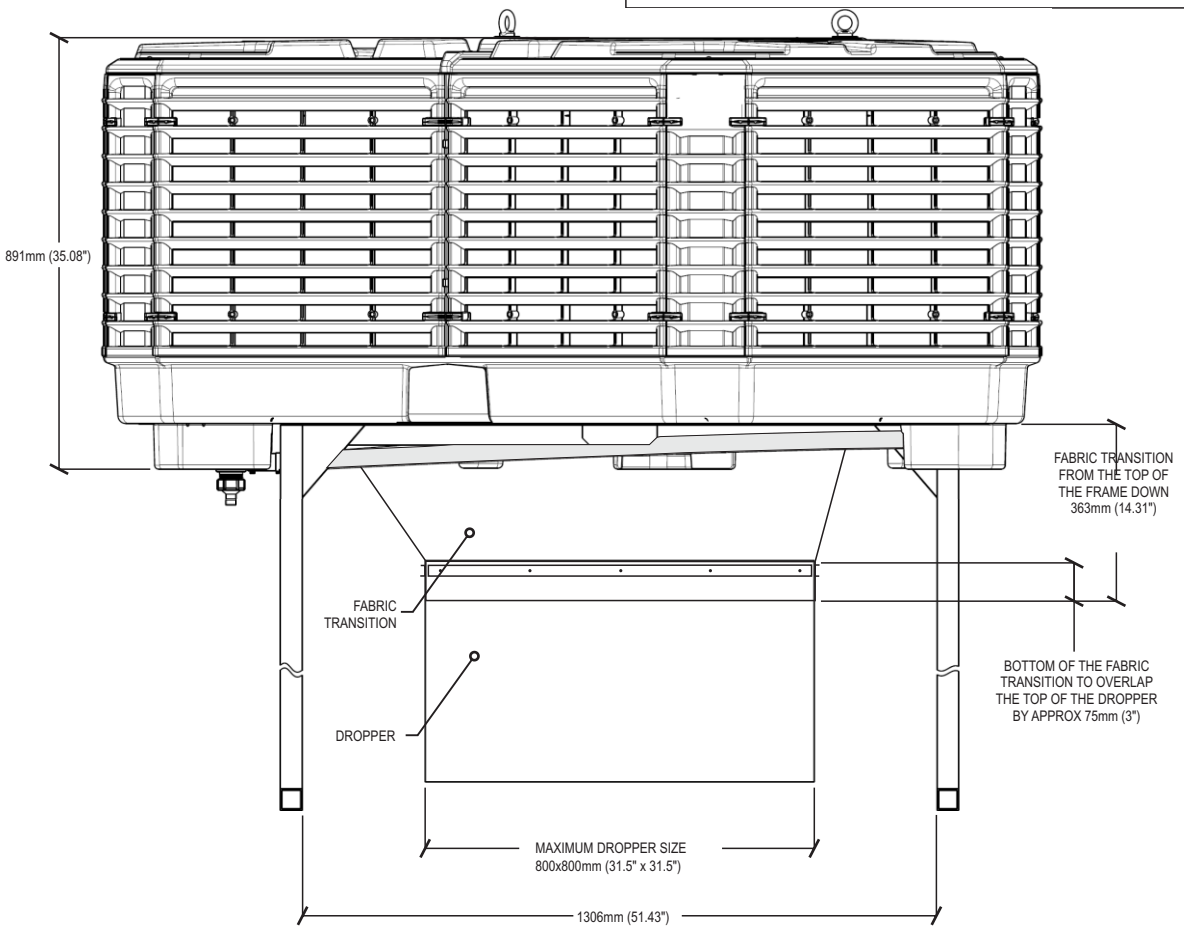


COOLER SPECIFICATIONS

SPECIFICATIONS

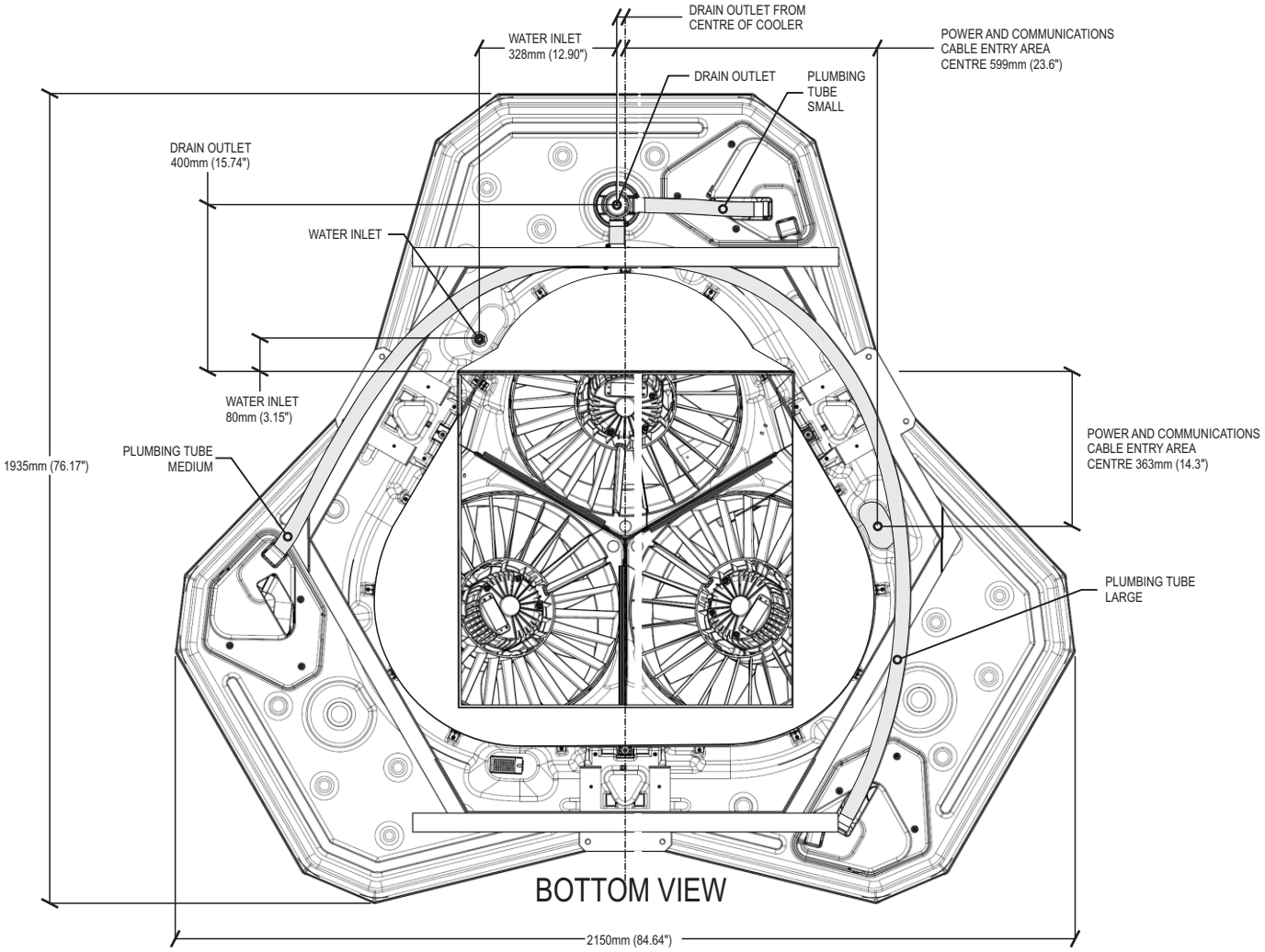
General	
Electrical supply	3-phase, 380-480, 50/60 Hz, 10 amps
Water supply	1/2" BSP male connection, min 100 kPa, max 800 kPa, 20 L/min (min 15psi, max 115psi, 5.3gal/min)
Max. operating temperature	55^{0}C (131^{0}F) ambient (shade)
Airflow	7675 L/sec - at 80 Pa (16262cfm - at 0.32" static)
Duct Connection	Flexible, to suit 800*800 duct entry
Fan	
Belt driven, multi-blade assembly, glass reinforced poly-propylene.	500mm (19.7") dia x 285mm (11.2") w
Motor	
Input Power 3 phase	3 motors, 1500W each (Nominal)
Pump	
Single phase, 2-pole, uni-directional,	3 pumps, 40 L/min (??gal/min)
220-240V, 50/60Hz	Input Power 128W ea.
Drain valve	
SI 12V, vertical, electric drive	1½" (40mm) BSP male.
Evaporative Media	
SI Chillcel type, 593*570*112	9 Pads
Water reservoir (3 piece, joined)	
SI 3 piece, vacuum formed polymer	40 L (11.9 gal)

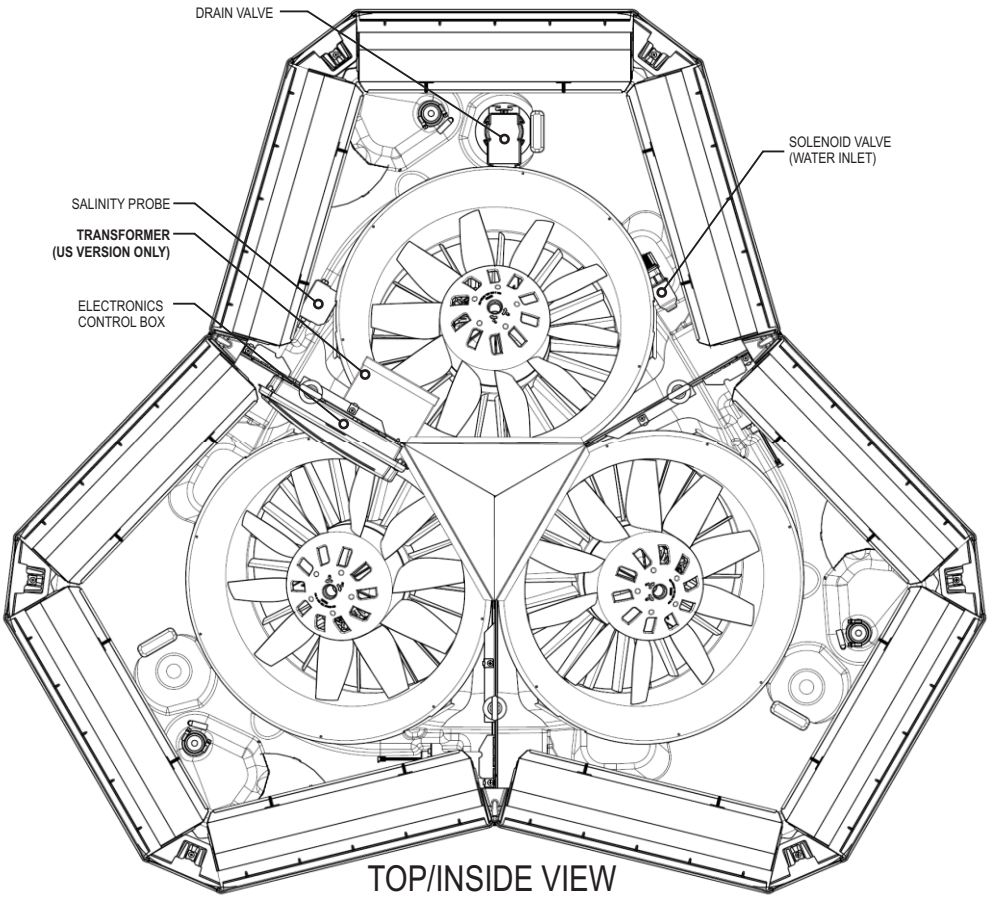




SIDE VIEW

COOLER SPECIFICATIONS





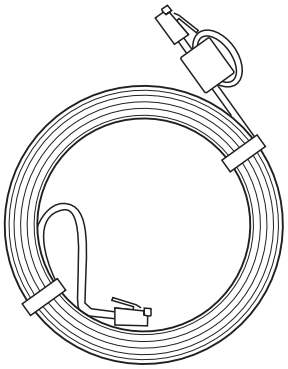
CONTENTS

COOLER INSTALLATION KIT COMPONENTS

1

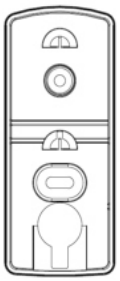
ITEM	DESCRIPTION	QTY
1	WALL CONTROL CABLE WITH FERRITE	1
2	UNIVERSAL WALL CONTROL	1
3	WALL CONTROL MOUNT PLATE	1
4	SCREW PAN PHIL 6ABX1"ZNP	2
5	WALL PLUG YELLOW 5mm (3/16")	2
6	DRAIN VALVE ASSEMBLY	1
7	HOSE CLAMPS ZP	8
8	SCREW PAN PHIL 14G SS	12
9	ENV MOUNTING PLATES	3
10	DUCT ATTACHMENT CHANNELS	4
11	SMALL LENGTH TUBE RUBBER	1
12	JOINER TUBE RUBBER	1
13	T PIECE	1
14	MEDIUM LENGTH TUBE PE	1
15	LARGE LENGTH TUBE PE	1

ITEM 1.



ITEM 2

ITEM 3



ITEM 4

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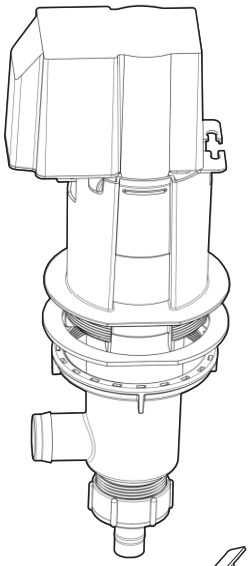
ITEM 6



ITEM 7

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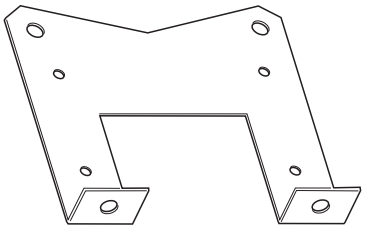
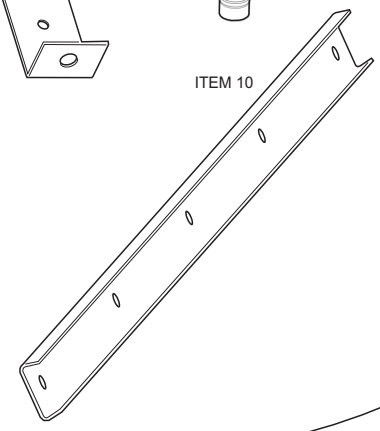
ITEM 9



ITEM 10

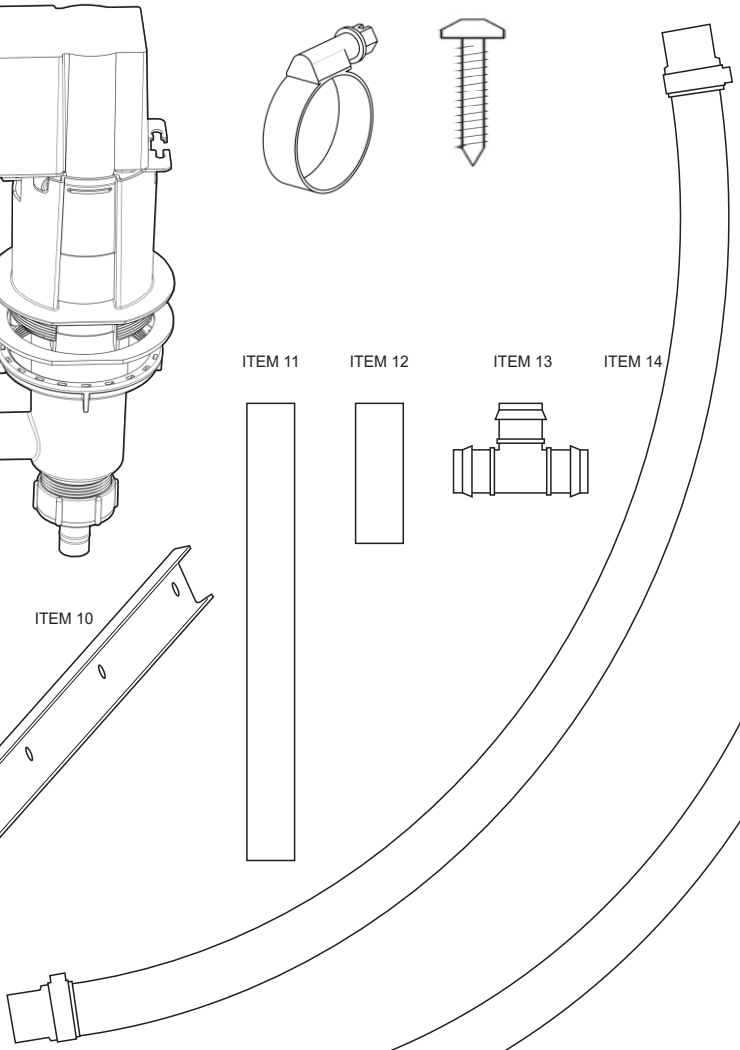


ITEM 11

ITEM 12

ITEM 13

ITEM 14



ITEM 15

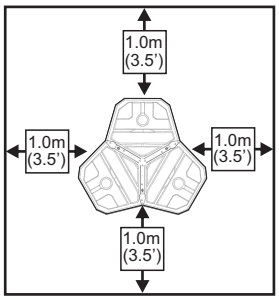
Cooler location

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
ENV	190kg (397 lb)	230kg (485 lb)

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.

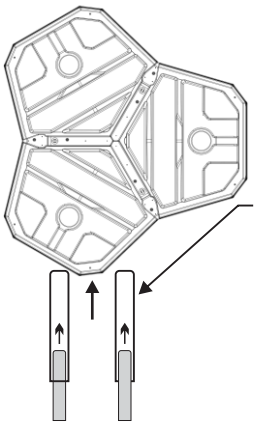
- **• Ensure the location is a minimum of:**
  - **3.0m (10') from a solid fuel heater flue,**
  - **1.5m (5') from a gas flue,**
  - **5.0m (16') from a sewer vent**
  - **Cooler = Min 1.0m (3.5') from a wall, 1.0m (3.5') at sides & front. to allow easy access for maintenance and pad replacement. Access should be provided to the underside of the cooler during installation and for maintenance purposes.**



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 or access walkways with the customer?
The ideal location for the cooler is in a central position on the roof so that the duct runs are of approximately the same length.
Carefully consider noise levels when locating the cooler, if necessary talk to the customer and the neighbour before carrying out the installation to determine the best location.

Removing the cooler from the container

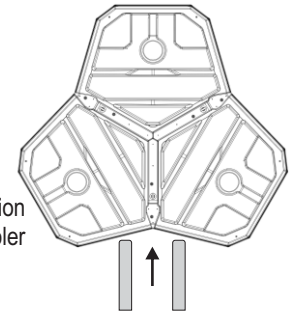
When removing the cooler from a container tyne extensions (slippers) may be required to prevent the cooler from over-balancing.



Forklift tyne orientation when removing the cooler from a container

Moving the cooler

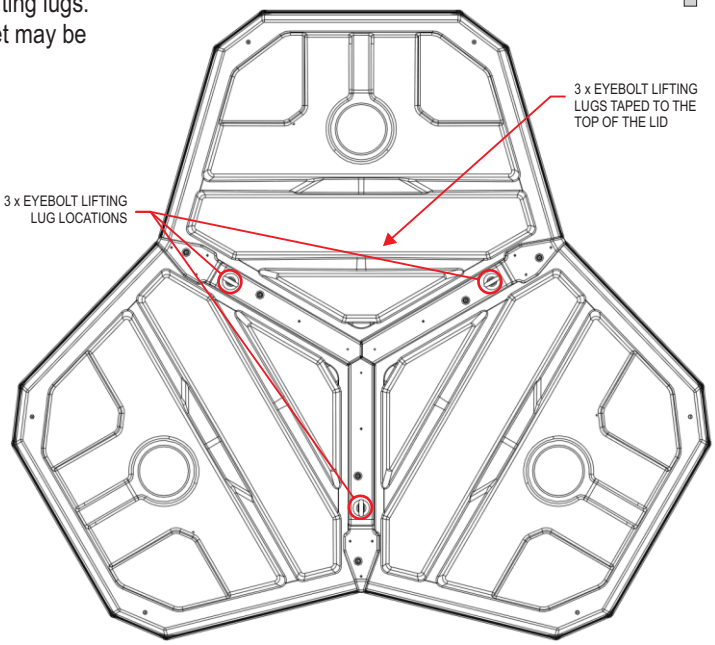
The cooler has in-built feet, to allow forklift access for ease of handling and movement.
The cooler weighs approx. 190kgs, and can be man-handled to final position by 3 persons.
When moving the cooler with a forklift, locate the fork tynes into the concave cooler section as shown.



Forklift tyne orientation when moving the cooler

Lifting the cooler

The cooler should only be lifted fully assembled using the lifting lugs.
Do not attempt to lift using any cabinet features. The cabinet may be damaged and/or lift safety compromised.



Unpacking the cooler

The cooler will be delivered wrapped in a plastic stretchwrap film which will need to be removed before installation.
Installation components can be found inside the cooler.

The ENV Mounting Plate and 14G screws will need to be removed in order to mount the cooler.

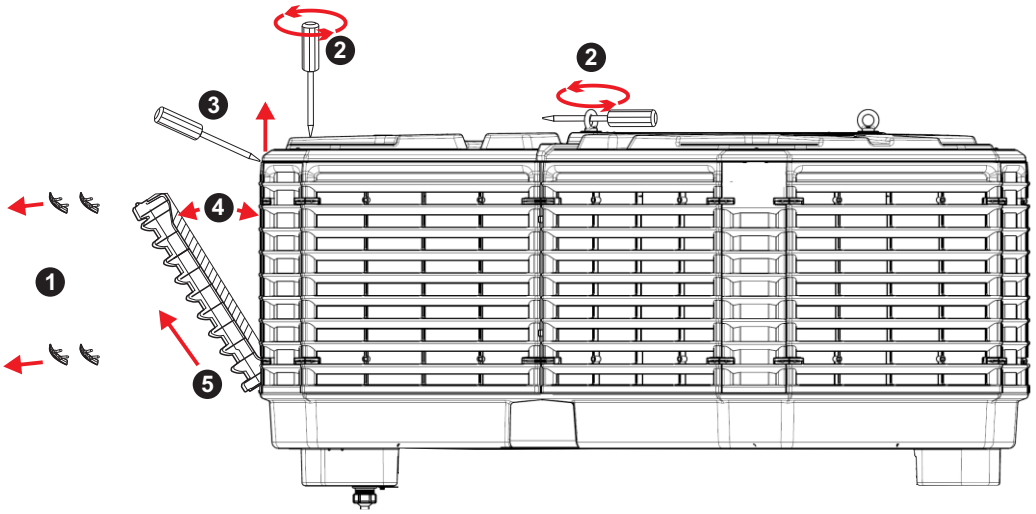
A padframe from the front of the cooler will need to be removed (the front module has the drain cut out in the tank) and the installation components assembled and fitted to the cooler.
The wall control and communications cable, along with ancillary mount plates, fasteners and drain adaptors will need to be placed aside for later connection.

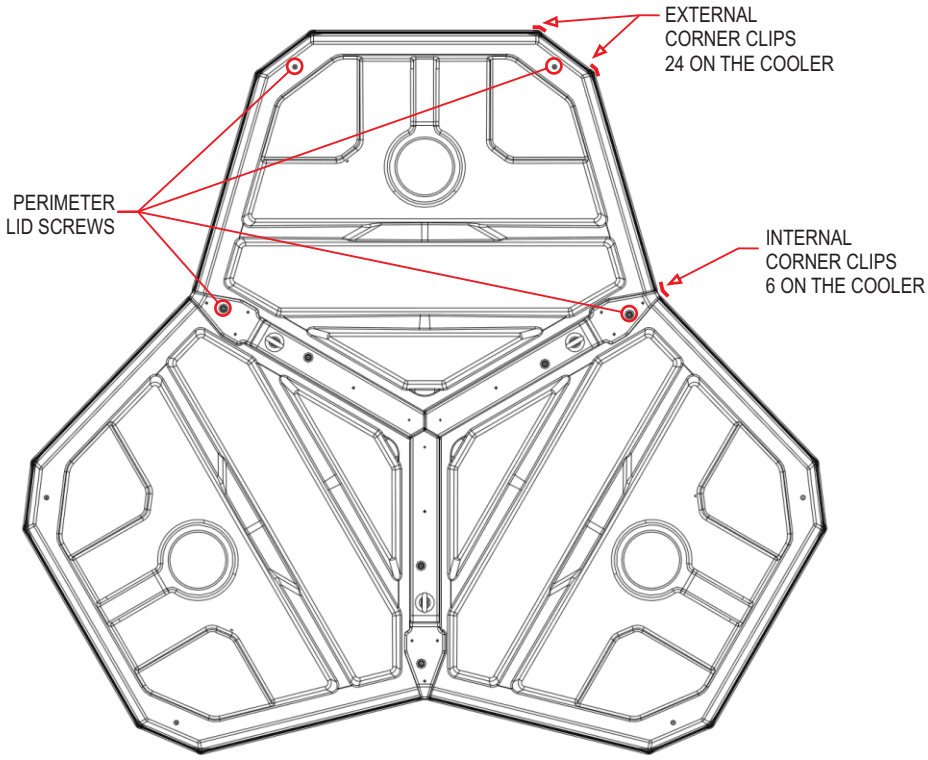
Removing Pad Frames

1. Remove the 4 clips that fasten the Padframe to the Corner Pillars, the clips may require a screw driver to aid removal.
   Note the difference in shape between the standard external corner clips compared to the internal corner clips.
2. Remove the perimeter lid screws retaining the cooler lid and loosen the adjacent eyebolts, if necessary, to allow the lid to be raised to release the Padframe.
3. Insert the screwdriver into the gap at the top of the Padframe in order to raise the Lid until the top edge of the pad frame disengages.
4. Pivot the frame outwards. (4)

PLEASE RAISE THE LID CLEAR OF THE PADFRAME AS IT IS REMOVED TO PREVENT DAMAGE TO THE PAD.

5. The frame is now free to be lifted out of the cooler cabinet (5).





Mounting the cooler

The **ENV Mounting Frame** drawing outlines the shape and dimensions for a frame to best fit the cooler ...
When the cooler is installed on a pitched roof it is recommended that the drain be oriented toward the low end to allow for maximum access to the underside of the cooler.

Vibration isolation

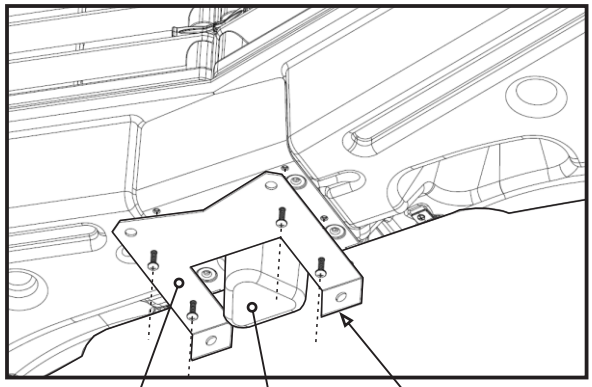
Use industry standard methods of fixing to the building structure. Waffle pads are recommended to be used under the cooler.

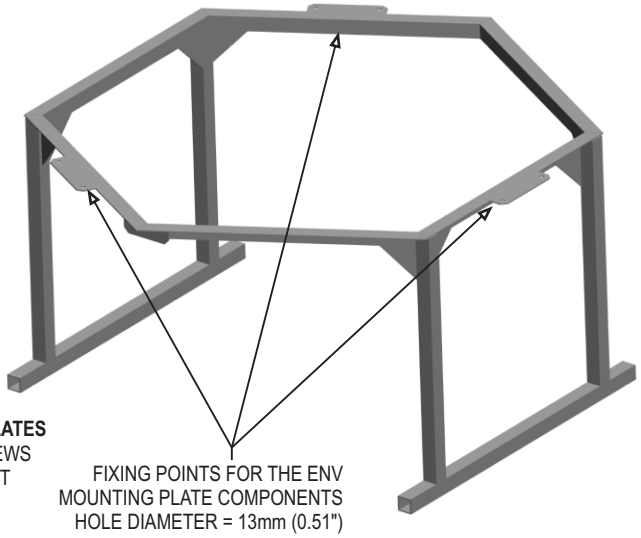
Duct Connections

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

The cooler also has a transport protection plate covering the venturi outlets on the underside of the cooler.
This will need to be removed after mounting the cooler onto the support frame.

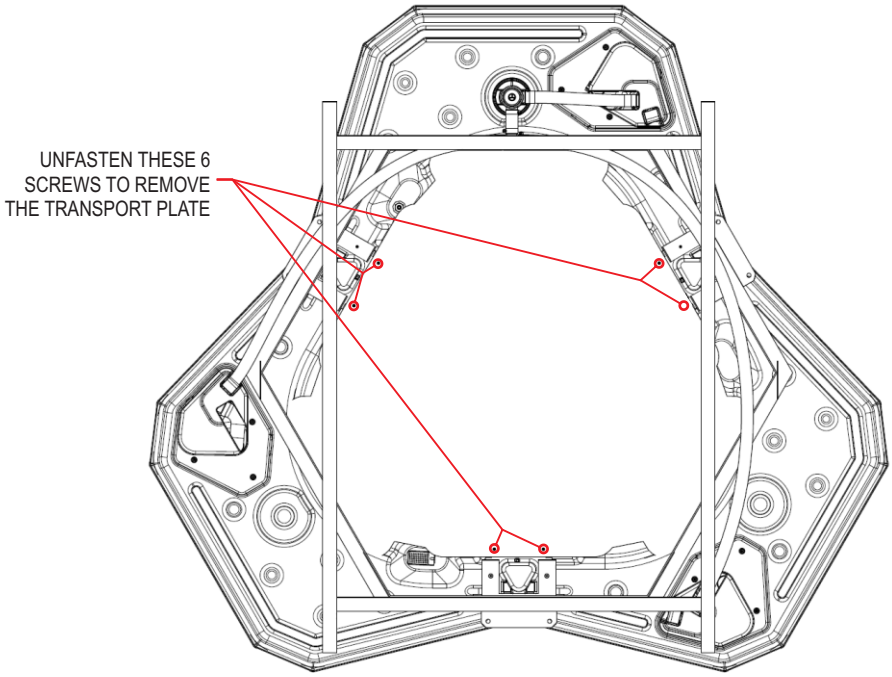
Fixing Mounting Plates

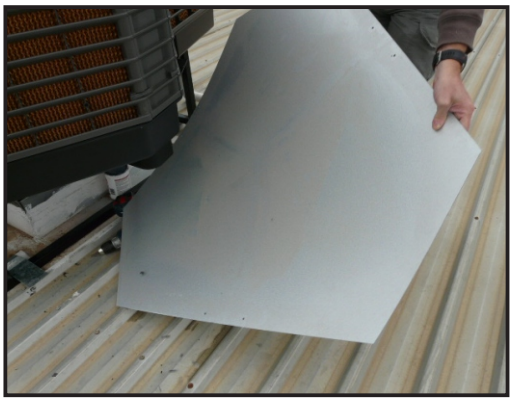




Removing the transport protection plate

After placing the cooler onto its frame the transport protection plate can be removed.
Unfasten the 6 screws that fasten the plate to the underside of the tank and slide the plate free from the cooler.
Do not invert or tip the cooler onto the side to remove the plate as parts may be dislodged or damaged.

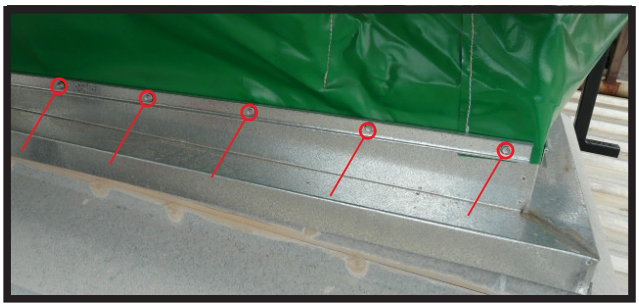




Mounting the cooler

Once the transport protection plate has been removed the flexible duct transition can be lowered.
Assemble and fix the flexible duct transition to the duct dropper using the duct attachment channels and some self tapping screws.

Fit the flexible duct transition to the duct dropper.



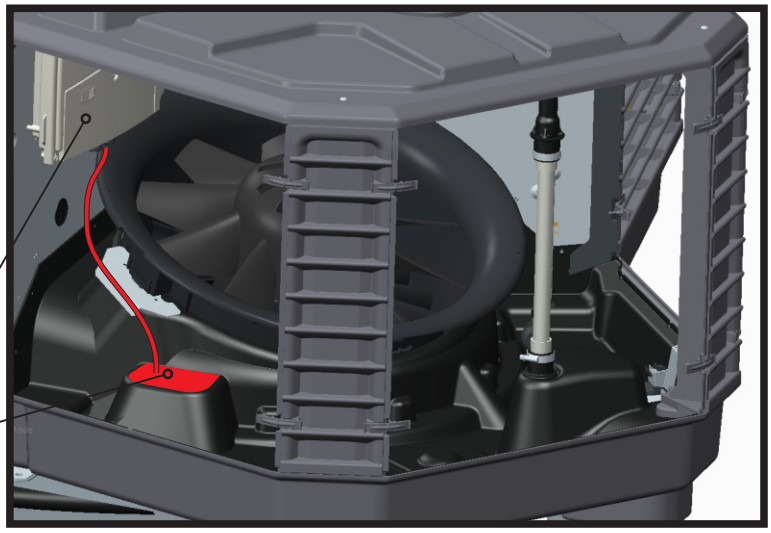
Secure with fastening strips and self tapping screws.

Installing Mains and Control Cables

Drill a hole through the base of the tank in the position indicated.

This raised surface will provide the entry point into the cooler for mains and control cable wiring.
Be sure to use a gland to seal the entry hole.

Route the wiring from the entry gland to the adjacent Cooler Control Box.

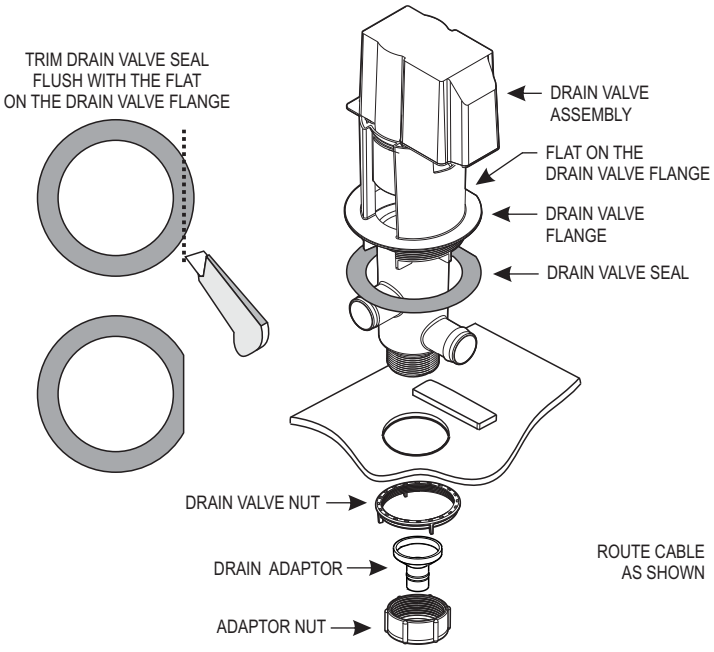


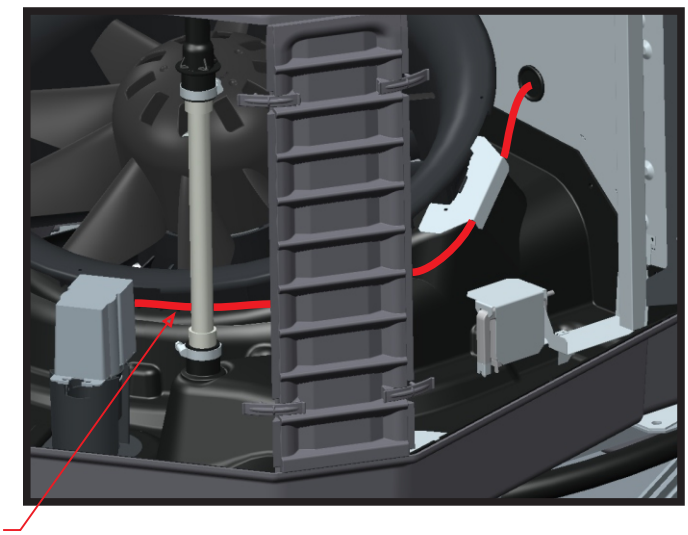
Installing the Drain Valve

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*** **.**

Assemble the drain valve as shown. Insert the drain valve body lower section through the tank hole. Make sure that the flat seal is fitted to the Drain Valve Assembly, below the flange, before placing the drain valve into the tank hole.
Screw the nut up tightly by hand from underneath the tank.
Now route the cable through to the Cooler Control Box as shown passing the cable through the grommet in the divider wall.

IF NOT ALREADY DONE SO.. PLEASE TRIM THE DRAIN VALVE SEAL TO BE FLUSH WITH THE FLAT ON THE DRAIN VALVE FLANGE.



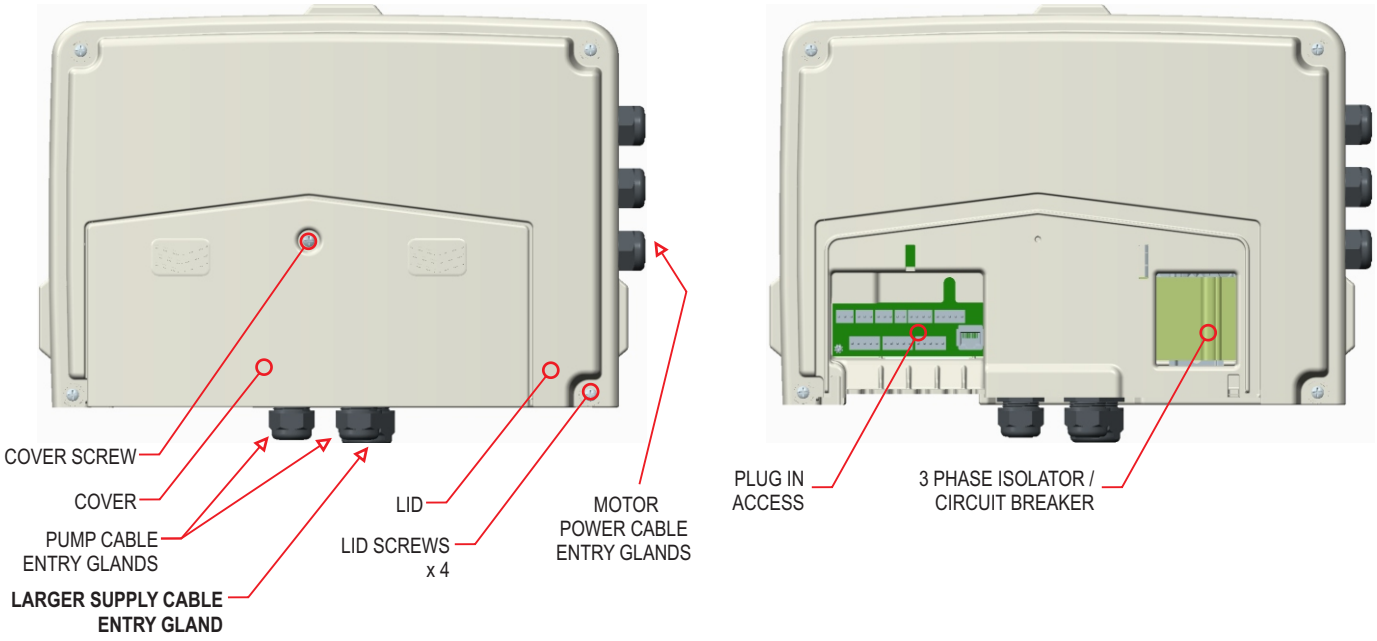


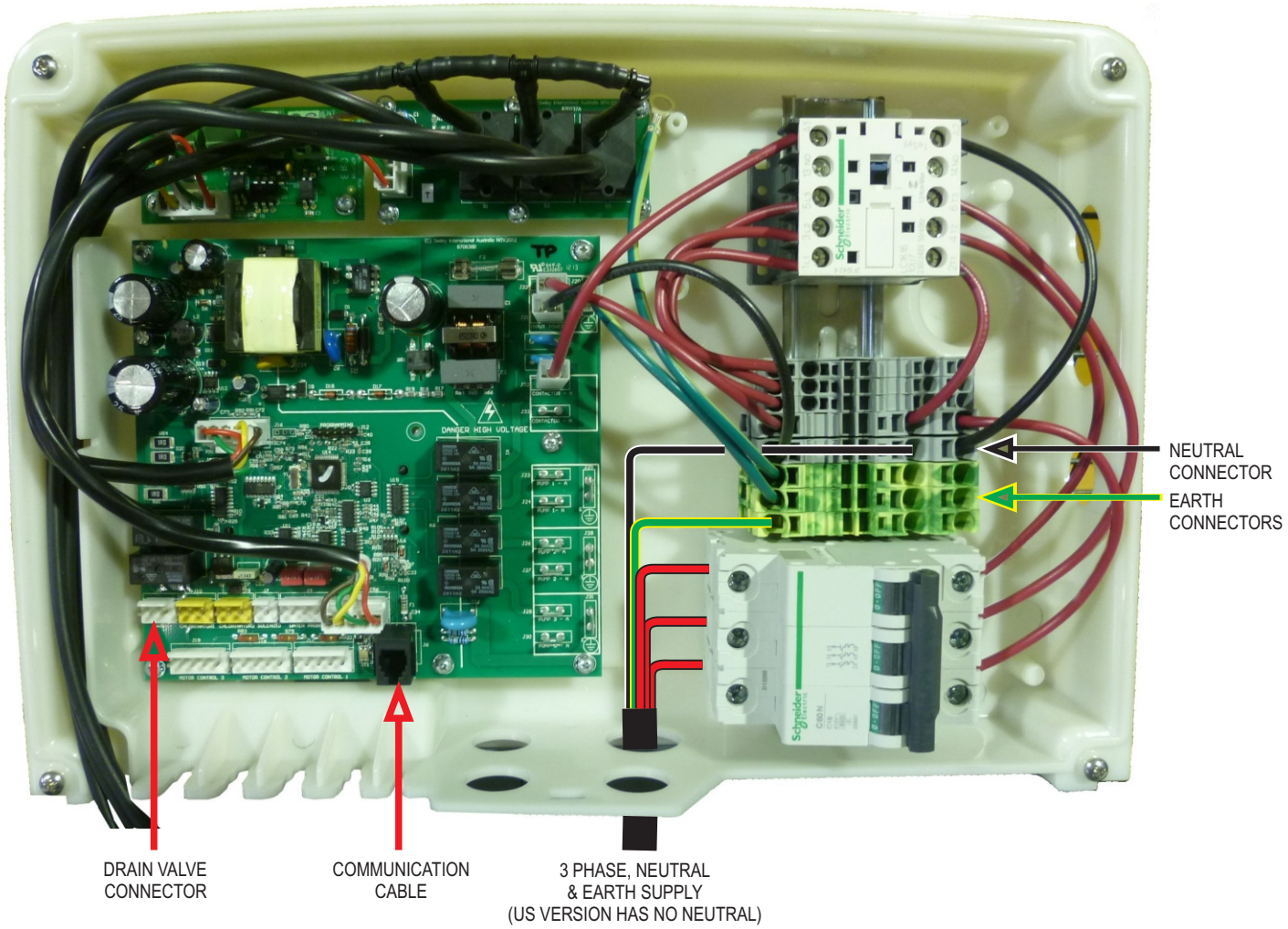
Electrical Supply Installation and control wiring.

Both the Enclosure Cover and then Lid will need to be removed in order to gain access to the 3Phase Isolator/Circuit Breaker.
The power supply cable is fed through the supplied gland and connected to the Isolator. The earth is attached to the adjacent green & yellow Earth Connector. The Neutral (Non US versions only) should be attached to the Neutral Connector adjacent the Earth Connectors.

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.

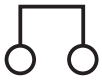




Transformer adjustments to Primary Input on the Transformer (US version only)

Depending on the supply voltage the Primary Input wiring will need to be adjusted to suit.
A suitable link must be placed as described accross the terminals indicated to suit the incoming supply Voltage.

USTE 250/2x115 Transformer

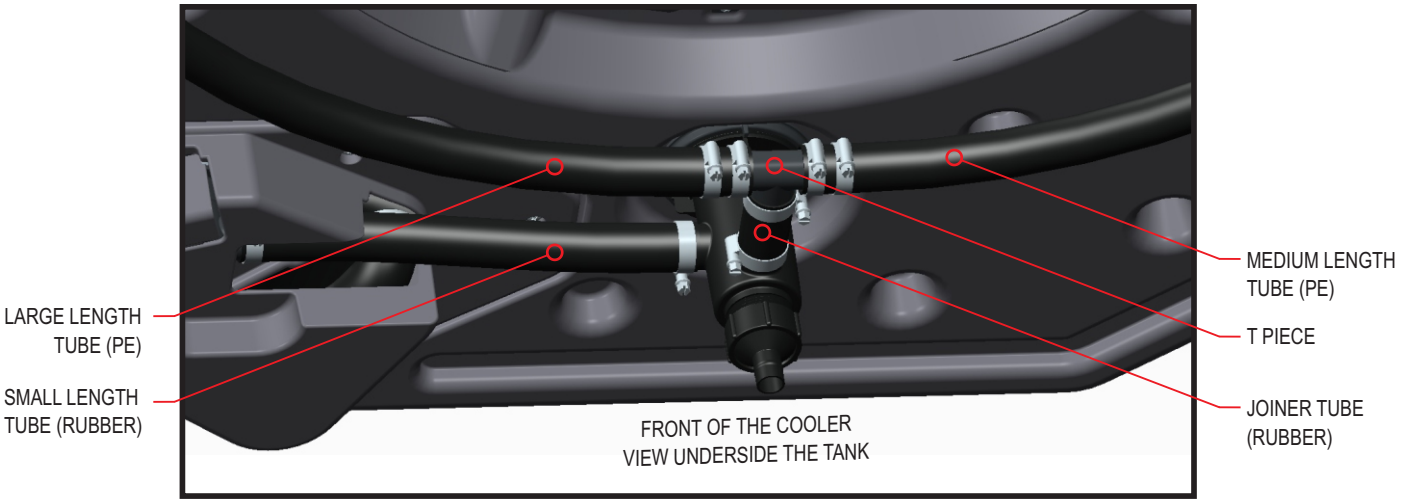

Jumper between for primary input

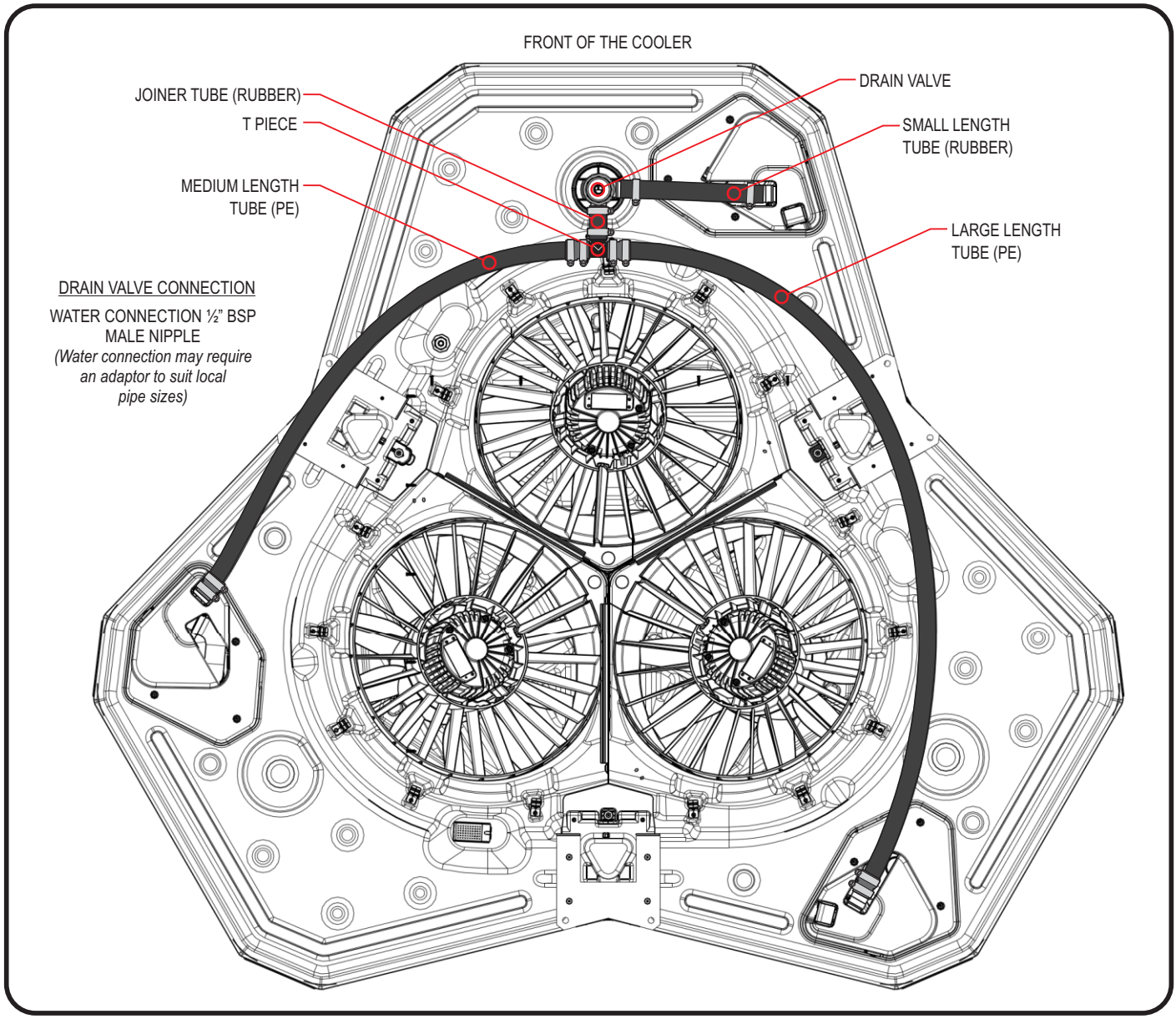
U Pri	I Pri	
208V	1.34A	1-37 & 2-31
230V	1.21A	1-36 & 2-32
380V	0.74A	31-38
400V	0.70A	32-38
415V	0.67A	31-37
440V	0.64A	32-37
460V	0.60A	32-36

U Pri	I Pri	
480V	0.58A	33-36
500V	0.56A	34-36
525V	0.53A	31-35
550V	0.51A	32-35
575V	0.49A	33-35
600V	0.47A	34-35

Drain Plumbing Connections.

The three tanks need to be connected to the installed Drain Valve using the supplied plumbing connections and hose clamps.
Please refer to the schematics below for instructions on the configuration of the connections.





Water Supply Installation

Installation of the water supply to the cooler must conform to local plumbing rules, regulations and standards.
The connection point is located in the front module of the cooler, please refer to the schematic on **page 5**

The following specifications for water supply are required:

Water Connections : ½" BSP Female threaded fitting required
Water Supply :100kPa (15psi) - 800 kPa (115psi) @ 20L/min (5.3 gal/min) MAXIMUM
Water Supply Temperature : 40°C (105°F) (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.***

Control Schemes

The ENVIROMAGIC is a large Industrial Cooler which uses 3 fans each direct driven by a 3 phase motor, each motor is driven from a Variable Frequency Inverter.

The pressure drop accross the pads is constantly measured in COOL MODE and the fan speed adjusted to maintain the required speed regardless of changes in the Static Pressure changes down stream of the fan in the Installation.

The Smart Card EEPROM plugged into the Cooler Control Box dictates the fan speeds as they relate to the bars on the wall control, it also dictates the maximum watering speed and the operating Pressure Drop range.

Whenever the user, or the auto algorithm, selects a particular Fan Speed on a Universal Wall Control (UWC), that Fan Speed number (1-10) is transmitted to the ENV Control. The ENV Control will then look up the Speed Table in the Smart Card EEPROM which returns a Duty Cycle based on the Fan Speed selected. This Duty Cycle will then be switched through to the 3 Motor Control Modules.

Enviromagic coolers are supplied from the factory with one (1) Wall Control and a 20m (65') 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^{0}C ($\pm$ 1^{0}F) of the set temperature.
Enviromagic 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 Enviromagic water management and fault monitoring features are fully operational.
The Enviromagic control scheme incorporates some Parameters that can be altered to other settings if the default settings are not suitable.

Building Management System (BMS) Interface
Enviromagic Coolers are supplied with an 'Interface PCB'.
This can be set up to control the Enviromagic from EXTERNAL devices, such as PLCs and Building Management Systems. In this case the Enviromagic 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

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 " ▼ " button. (If " ▼ " button is pressed before three (3) seconds, nothing will be on the display. If " AUTO " button, is continued to be held subsequent presses of " ▼ " button will allow access).

2. When parameter mode has been entered, screen will display "A1" and "Param". Pressing " ▲ " or " ▼ " 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 " ▲ " or " ▼ ". 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 " ⏻ " 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 µS/cm	00*
	- Low conductivity - 2305 µS/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 °C	00*
	- Display °F	01

* = Default Value

Wall Control Installation
Locating the wall control
(Stand Alone & Supplementary Cooling)

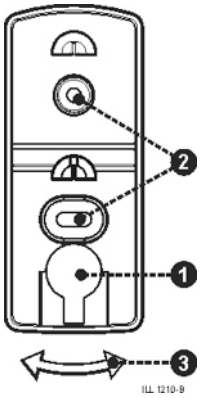
The wall control should be placed approximately 1.5 m (5') above the floor, in the general area of the cooled zone.

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.

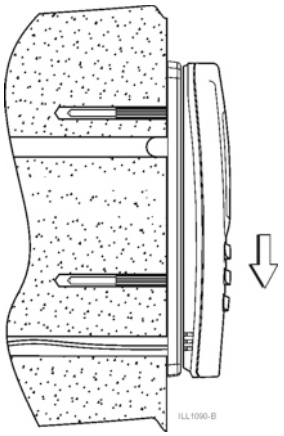
CAUTION! Always make sure there are no electrical cables, gas or water pipes, or the like, behind where you intend to drill.

1 **Fixing the wall control bracket to a plasterboard wall**



Use the bracket as a template.
1. Drill the 16mm (5/8") hole for the wall control cable
2. Drill the 5mm (3/16") holes for the wall plugs.
3. Insert the wall plugs into the holes. Align and screw the bracket into position using the supplied screws.

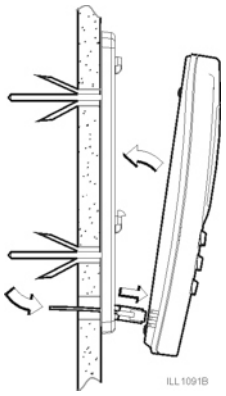
2 **Fixing the wall control bracket to a brick wall**



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 (1/4") 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

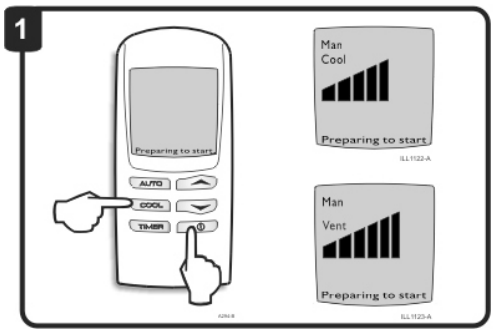
Using the loop on the end, draw the cable through the wall cavity to the hole made at the wall bracket. Carefully remove the tape from the cable loops and check that the plug has not been damaged. Connect the cable to the wall control and mount the wall control onto its bracket.

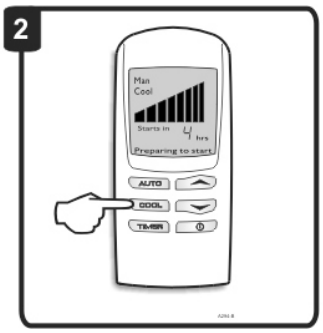
Important! Take care not to damage the cable or plug during this process. Always seal the cable entry hole.

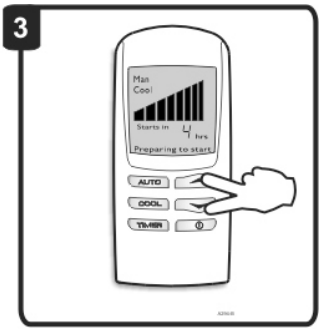
Turning the Cooler on

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 COOL 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 COOL 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.





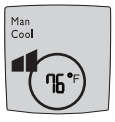


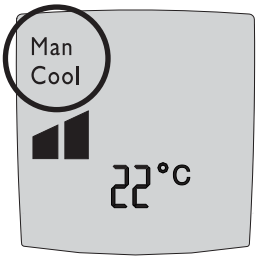
Wall Control

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 cores. 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 AUTO button until MAN is shown on the display. (Note: The Wall control display will default to show temperature in deg C (Celcius). If deg F (Farenheit) is desired, refer to Pg16 for instructions on how to change the A8 Temperature Unit parameter.)



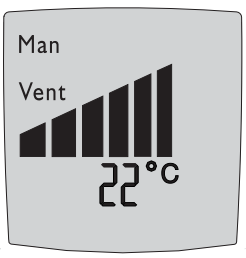


ILL1122-A

You may then press the COOL 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.

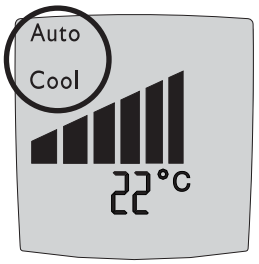
To increase or decrease the fan speed required, press either the ▲ or ▼ button.



ILL1123-A

Wall Control

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



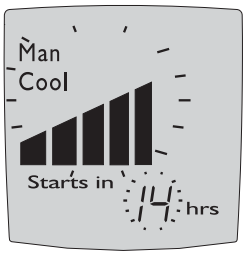
ILL1124-A

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.

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:

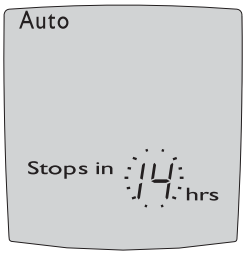
Programming in manual mode
(1)..... Press the TIMER button.
(2)..... Press the AUTO button until "MAN" is displayed on the screen.
(3)..... Press the ▲ or ▼ button until the desired fan speed is displayed by the bars in the middle of the screen.
(4)..... Press the COOL button to set either COOL or VENT.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



ILL1118-A

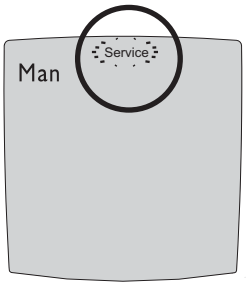
Programming in auto mode

(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

Wall Control

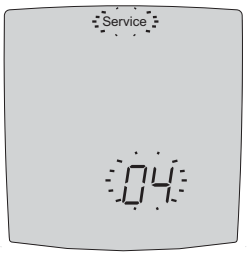
SERVICE MODE
When a fault has been recognized by the wall control the word “Service” flashes on the screen. When “Service” is displayed it maybe necessary for you to contact your Service Agent. However, before doing so, turn the wall control OFF. You will notice a number flashing at the bottom of the 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

ENV Fault Codes

#1 – Communication Failure

#2 – Failure to Detect Water at Low Probe

#3 – Failure to Detect Water at High

#4 – Failure to Clear Low Probes During Drain

#5 –Water Detected at High Probe but not at Low

#6 – Failure to Clear High Probe

#7 – Motor Error

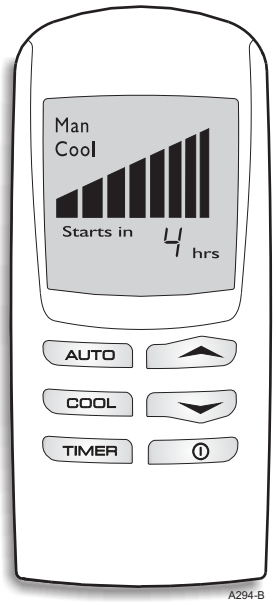
#8 – Warm Start / Input Voltage under 90Vac

'A' - Chlorinator Fault

‘b' - Smart Card

‘c’ - 1 of 3 Motors Failed

‘E’ - Pressure Sensor Failure



A294-B

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.

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
	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.
	Fan out of balance due to dirt. etc.	Clean the fan.
	Air distribution system creating too much back pressure,	Have contractor re-evaluate his design; use bends
	Pump motor failure.	Replace pump.
	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. 31)
	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 cores 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.
	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
	Heavy core deposits.	Replace cores.
	Fault in the cooler.	Contact your Service Agent.