



INSTALLATION & OPERATION MANUAL

CTA250 and CTA500 Evaporative Cooler

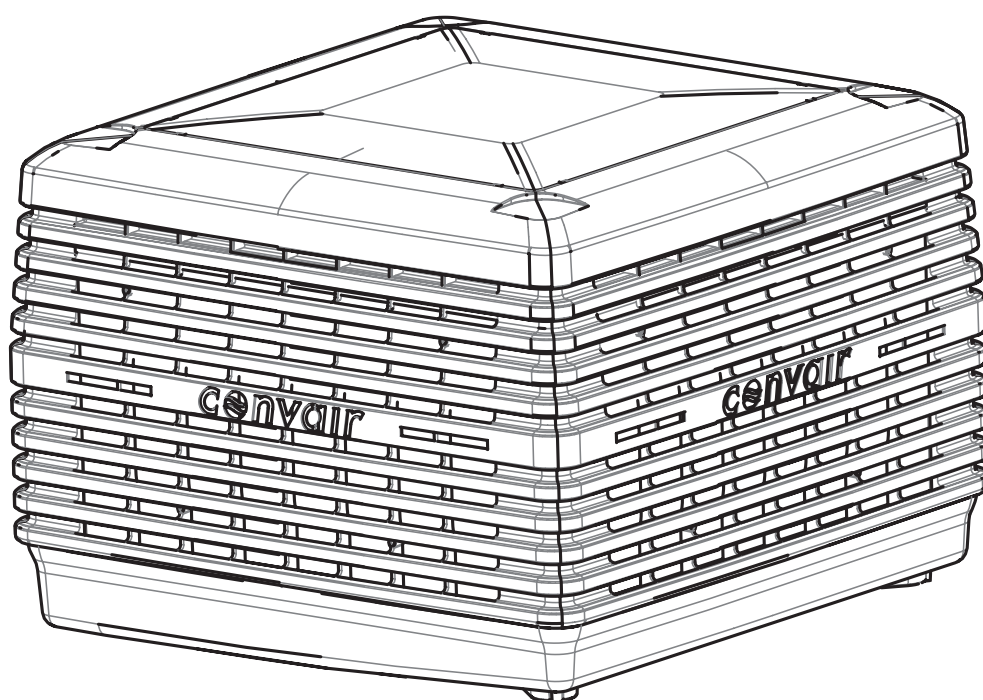


TABLE OF CONTENTS

IMPORTANT SAFETY INSTRUCTIONS	1
Read And Save These Instructions For Future Reference.	1
Warnings	1
Employer And Employee Responsibilities	1
Installer And Maintenance Contractors - Risk Assessment	1
Some Points To Consider	1
Other Important Requirements	1
QUICK GUIDE	2
INSTALLATION	4
Cooler Location	4
Access For Servicing And Maintenance	4
Removing The Venturi	4
Removing The Transition	5
New Installations	5
Mounting The Roof Jack	5
Securing The Roof Jack And Transition	5
Existing/Replacement Installations	6
Fitting The Optional Leg Support Kit	6
Fitting The Optional Weatherseal	7
Conveying The Cooler To The Roof	7
Mounting The Cooler	8
Cable Installation	8
Installing The Venturi/Fan Assembly	8
Water Requirements	9
Water Pump	9
Installing The Float Valve	9
Mains Water Connection	9
Bleed Funnel	10
Electrical Requirements	10
Fitting The Optional Purge Pump	10
Mains Connection	11
COMMISSIONING THE COOLER	12
Refitting The Pad Frames	12
Setting The Water Level	12
Commissioning Completion Checklist	13
TROUBLE SHOOTING	14
EXPLODED VIEW	15
USER SAFETY	16
OPERATING INSTRUCTIONS	16
Operating Your Cooler	16
Continuous Bleed System	16
Health Regulations	16
MAINTENANCE	17
Access For Servicing And Maintenance	17
Residential Maintenance Schedule	18
Additional Requirements For Coolers With Bleed System	19
Residential Service Record	20
Commercial / Industrial Maintenance Schedule	21
Requirements For All Coolers	21
Additional Requirements For High Operation Hours	22
Commercial Service Record	23
NOTES	24

WARNING! Failure to install and commission the product in compliance with these instructions, or failure to do the job properly and competently, may void the customer's warranty. Further, it could expose the Installer and/or the Retailer to serious liability.

IMPORTANT SAFETY INSTRUCTIONS

READ AND SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

Means for all pole disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

The following specifications for the cooler water supply are required:

Min Water Pressure: 15psi (100kPa)

Max Water Pressure: 115psi (800kPa)

New hose sets supplied with the appliance are to be used and old hose-sets should not be re-used.

WARNINGS

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

1. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
2. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
3. Ducted fans must always be vented to the outdoors.
4. Do not use this fan with any solid-state speed control device.
5. Do not use replacement parts that have not been recommended by the manufacturer (e.g. parts made at home using a 3D printer).

EMPLOYER AND EMPLOYEE RESPONSIBILITIES

The installation and maintenance of evaporative coolers 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 National 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 - RISK ASSESSMENT

A risk assessment of all hazardous tasks is required under legislation. 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. 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? (Flat sole jogger type is advisable.)
- 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 holes in the pan (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.

Ensure the installation complies with all local and national regulations with regards to electrical, plumbing and bushfire/wildfire construction requirements.

QUICK GUIDE

Step 1

SAFETY

Read & understand the safety section.



Page 1

Step 2

COOLER LOCATION

Check cooler location. Consider regulations. Discuss with customer.

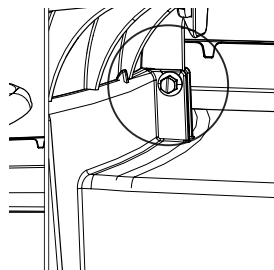


Page 4

Step 3

REMOVE VENTURI

Press the clip or remove the screws on both sides of the venturi to release.

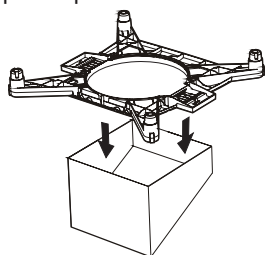


Page 4

Step 7

SECURE ROOF JACK & TRANSITION

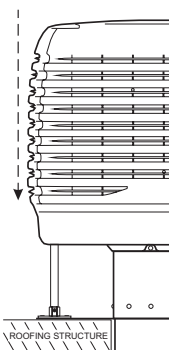
Use the TEK screws provided. Break the transport clips for the weatherdamper.



Page 5

Step 8

FIT OPTION LEG SUPPORT

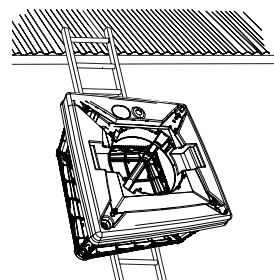


Page 7

Step 9

CONVEY COOLER TO ROOF

Always use 2 persons to position the cooler when handling manually.

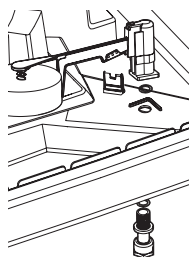


Page 7

Step 13

INSTALL FLOAT VALVE

Assemble the float valve to the cooler. Ensure all washers and o-rings are in place. No thread tape is required.

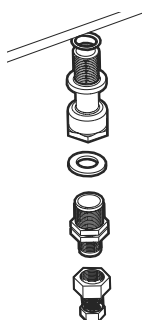


Page 9

Step 14

CONNECT MAINS WATER

Use the supplied fittings.

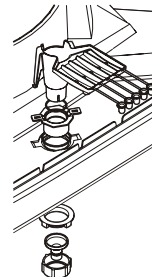


Page 9

Step 15

INSTALL BLEED FUNNEL

Never drain waste water directly onto the roof. Be sure to use supplied 'O' Rings and fittings.

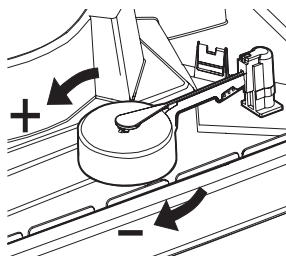


Page 10

Step 19

SET THE WATER LEVEL

Turn on the mains water and adjust the float to allow water to fill to the required level.



Page 12

Step 20

COMMISSIONING THE COOLER

Switch the mains power on and test run the cooler.

Page 13

Step 21

FINAL CHECK

Complete the commissioning checklist at the end of this document.



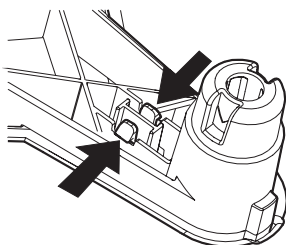
Page 13

QUICK GUIDE cont.

Step 4

REMOVE TRANSITION

Press the clips inwards to release the transition from the pan (reservoir).

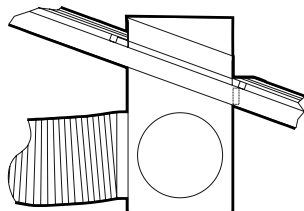


Page 5

Step 5

PREPARE AND MOUNT ROOF JACK

Position, level and secure the roof jack. Flash the roof jack to prevent water ingress into the roof cavity.

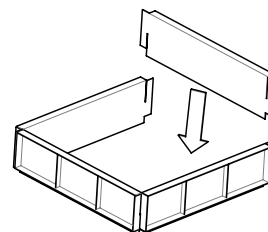


Page 5

Step 6

FIT THE ROOF JACK ADAPTOR (OPTIONAL)

For existing/replacement installations with roof jack.

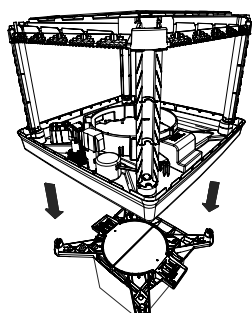


Page 5

Step 10

MOUNT THE COOLER

Lower the cooler onto the transition.

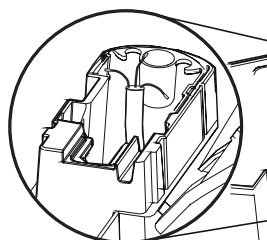


Page 8

Step 11

CABLE INSTALLATION

Run the power and control cable up through the pan (reservoir)/transition into the cooler.

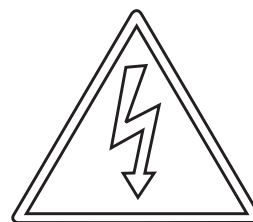


Page 8

Step 12

LOCAL REGULATIONS

Read and adhere to local electrical and plumbing rules and regulations.

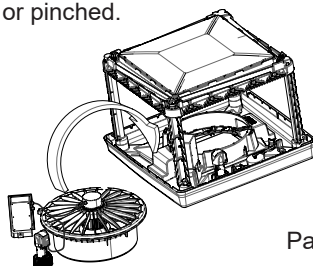


Page 10

Step 16

INSTALL VENTURI / FAN

Ensure the venturi is fully located into the pan (reservoir) and the motor lead is not caught or pinched.

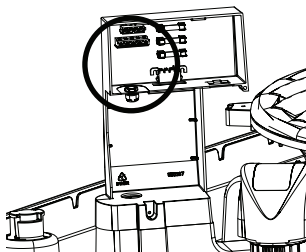


Page 8

Step 17

ELECTRICAL CONNECTIONS

Connect mains cable into the junction box.



Page 10

Step 18

MOUNT AND CONNECT THE CONTROLLER

Step 22

CLEAN UP

Clean up the site!

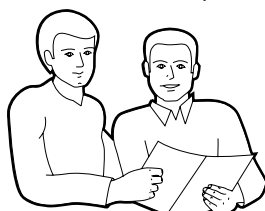


Page 13

Step 23

CUSTOMER HANDOVER

Show the customer how to operate the cooler. Give them both the controller and cooler owner's manual. Explain maintenance requirements.



Page 13

INSTALLATION

COOLER LOCATION

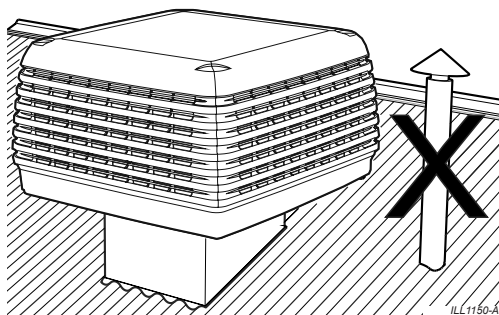
Check proposed cooler location to ensure it is structurally capable of supporting the weight of the cooler. If the roof is structurally inadequate, provide an alternate load bearing structure.

The ideal location for the cooler is in a central position on the roof (away from sleeping areas and where people spend most of their time) so that the ductwork runs are of approximately the same length. Carefully consider neighbouring residences and noise levels when locating the cooler, if necessary talk to the customer and the neighbour before carrying out the installation.

Always locate the cooler where it will receive adequate fresh air and not in a recess where it may be starved for air or where the air is polluted.

Ensure location is a minimum of:

- 10' (3m) from a solid fuel heater flue,
- 5' (1.5m) from a gas flue,
- 3.5' (1m) away from adjacent solar panels or similar roof mounted fixtures,
- 17' (5m) from a sewer vent, and
- 2' (600mm) from a wall.



- The cooler must be mounted at least 10' (3m), preferably 17' (5m) away from any TV antenna or antenna cables. Make sure the cooler is not between the antenna and the transmission tower that is providing the television signal to the home.

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?

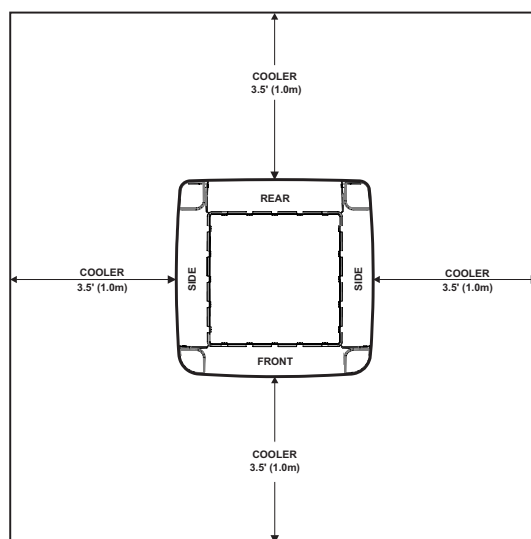
ACCESS FOR SERVICING AND MAINTENANCE

The cooler should be installed in a position that allows adequate access for installation, and future maintenance and servicing activities. This should comply with installation guidelines and any local, State and National regulations.

Consider the following for installation location:-

- Which has clear access to and around the cooler
- Which is clear of fixtures in line with below clearances
- Which is clear of fall edges (> 10' (3m) away)
- Which is structurally capable of supporting the weight of the cooler and service technicians

Required clearances around the cooler for future maintenance and servicing are shown adjacent.

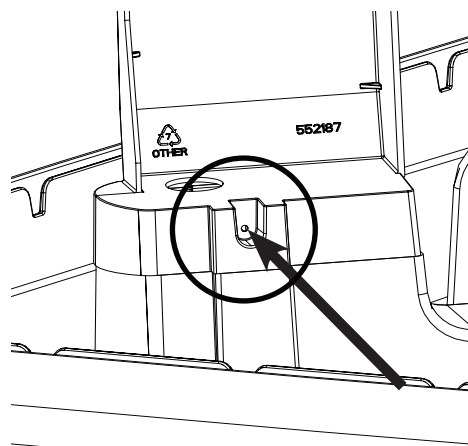


Extra service or warranty charges may apply for the cost of any equipment or additional labour involved in accessing the cooler if these guidelines are not met.

REMOVING THE VENTURI

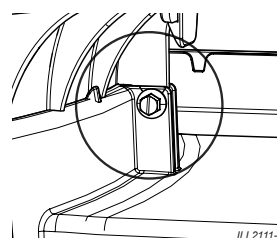
Before removing the venturi, the electronics module should be removed.

Disconnect the electronics module from the tank by removing the screw as shown. Remove the pump and motor cables from the plugs in the electronics module.



Note! Place the electrical enclosure and the screw safely to one side for later use. Do not re-fit the electrical enclosure, as the mains power, speed control, motor and pump cables will require connection to terminals inside of the box when the venturi is refitted into the cooler.

Turn the cooler onto its side to remove the transition. There are clips in each of the four corners that will disengage once the transition is given a firm pull. Remove the 2 screws securing the venturi to the pan (reservoir).



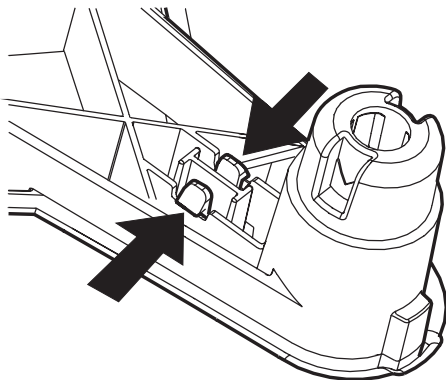
INSTALLATION

Lift the venturi and fan assembly out of the cooler, taking care of the motor lead.

The venturi fan assembly, pump and electrical enclosure can be placed on to the ground until the rest of the cooler has been installed on the roof jack.

REMOVING THE TRANSITION

If any of the corners are difficult to remove, do not use excessive force. Gently squeeze the clips together and remove the transition one corner at a time



NEW INSTALLATIONS

For new installations the roof jack will be required to support the entire weight of the unit. It is recommended that the roof jack is designed to be 21 5/8" x 21 5/8" (550 x 550mm) and made from 24G steel. The roof jack must have a raw edge or safe edge at the top. Do not fold in a flange as this may interfere with the transition.

MOUNTING THE ROOF JACK

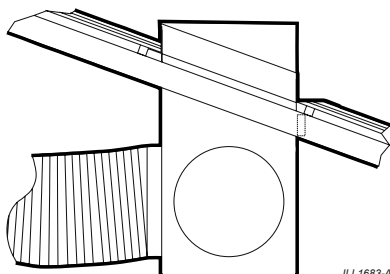
Install the roof jack and securely fix it to the roof structure on 3 sides. This may require the addition of extra structural timber.

Important! The roof jack must never sit directly on ceiling joists or beams, as this may cause noise or vibration issues, and possible ceiling damage.

Ensure the top of the roof jack is level and square in all directions (use a spirit level). This helps with levelling the cooler.

The installer must ensure the roof jack is suitable, and is secured adequately for wind conditions at the site. Additional restraints may be required if the cooler is more than 8" (200mm) higher than the roof timbers, or design wind velocity at the site exceeds 141fps (43m/s).

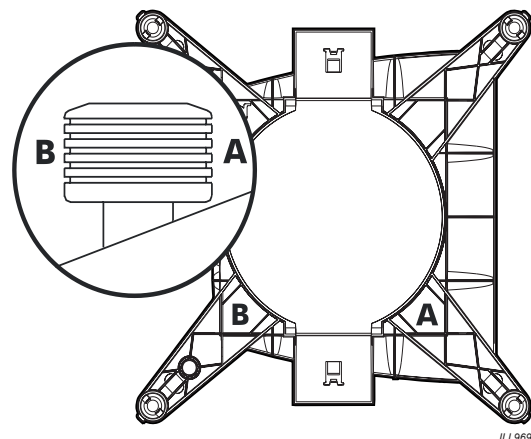
In exposed or very high wind areas use 16 screws, minimum shank diameter 7/32" (5.2mm), to secure the roof jack. In areas subject to hurricanes/windstorms or where the cooler is located more than 26' (8m) above the ground seek advice from a structural engineer.



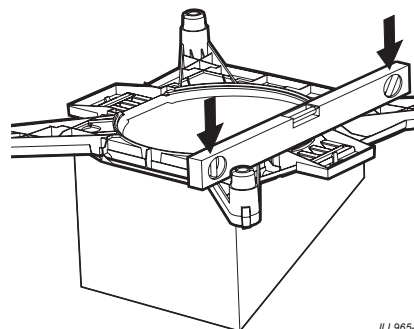
The roof jack may now be flashed to the roof. Make sure there is no chance of water entering the roof space.

SECURING THE ROOF JACK AND TRANSITION

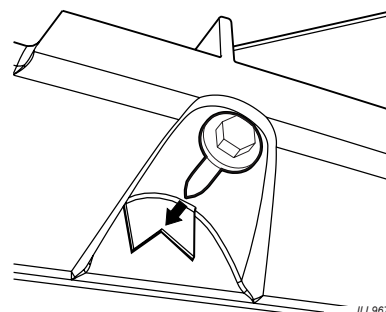
Fit the transition onto the roof jack as shown. Ensure that it is orientated correctly, as shown by the engraved detail on the transition.



Check the level of the transition on the roof jack, with a spirit level placed across the flats in both directions.



Once level, begin securing the transition to the roof jack using the screws provided. There are eight 'V' notch locations for screws.



Only use the screws provided. All eight (8) screws must be used. Check the level periodically before driving in all the screws.

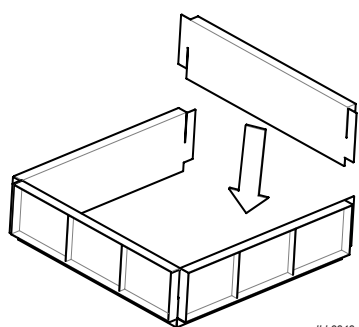
Ensure the duct insulation is firmly held against the connector flange on the roof jack.

INSTALLATION

EXISTING/REPLACEMENT INSTALLATIONS

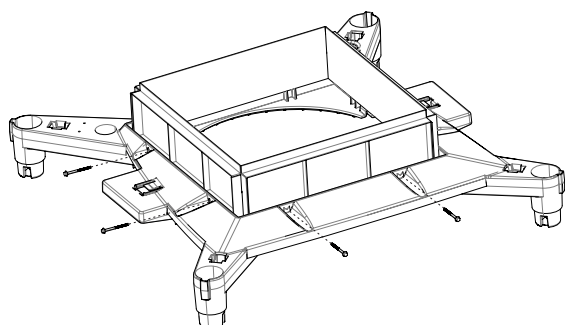
The CTA250/500 is designed for a roof jack which is 21 ⁵/₈" x 21 ⁵/₈" (550mm x 550mm) and made from 24G steel which will be able to support the entire weight of the unit. On existing/replacement installations ensure a suitable roof jack is used.

Assemble the roof jack adaptor as shown using the interlocking slots ensuring the flat surfaces are on the inside of the adaptor.



ILL2848-A

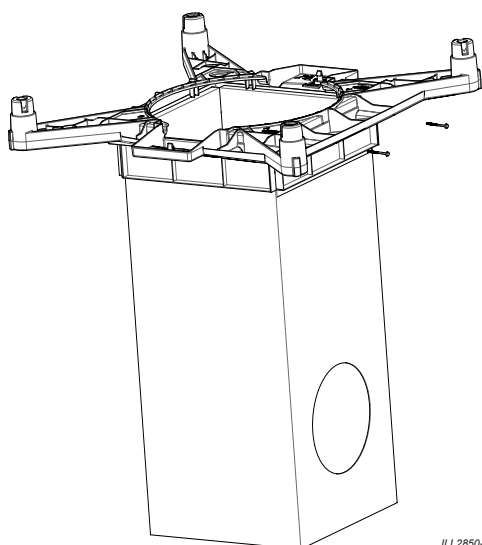
Place the adaptor in the transition and screw in place using the screws provided. Ensure the screws go through both the transition at the eight "V" notch locations and adaptor.



TRANSITION SHOWN UPSIDE DOWN

ILL2849-A

Place the adaptor and transition onto the roof jack and using the screws supplied, secure the adaptor in place along the top edge.

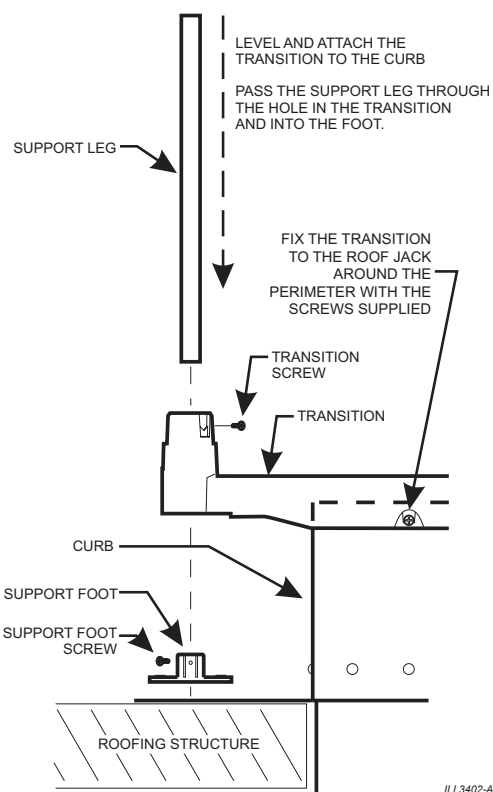


ILL2850-A

Note: In locations in high winds or where leg supports are required, Seeley International provides a kit. Contact your nearest Seeley supplier for more details.

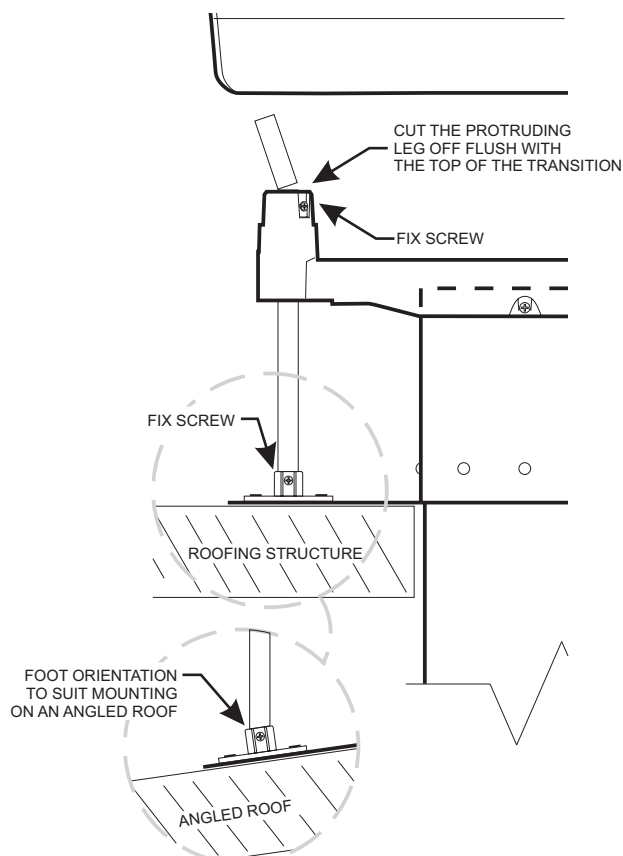
FITTING THE OPTIONAL LEG SUPPORT KIT

STEP 1



ILL3402-A

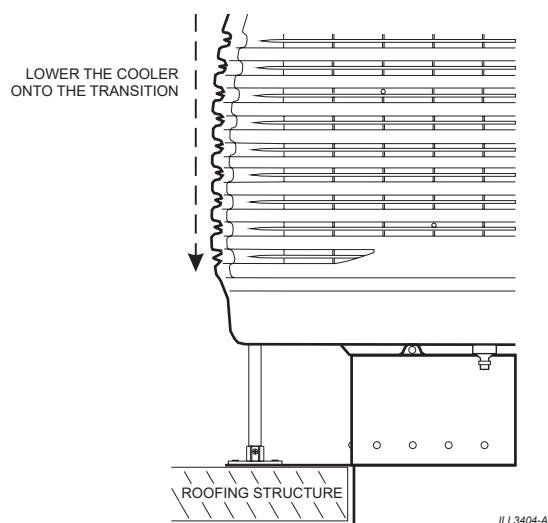
STEP 2



ILL3403-A

INSTALLATION

STEP 3



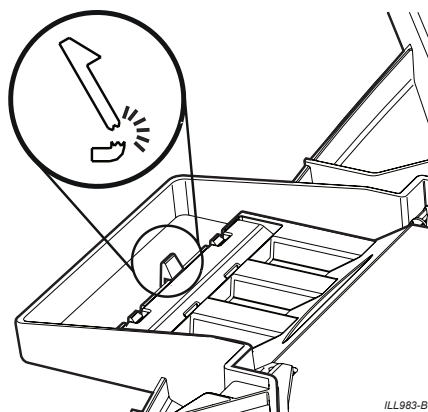
ENGINEERS AND INSTALLERS PLEASE NOTE:

The cooler must rely on the curb and roof jack for its major attachment to the building. The legs shown on this diagram have no performance ratings for down-load or wind-load.

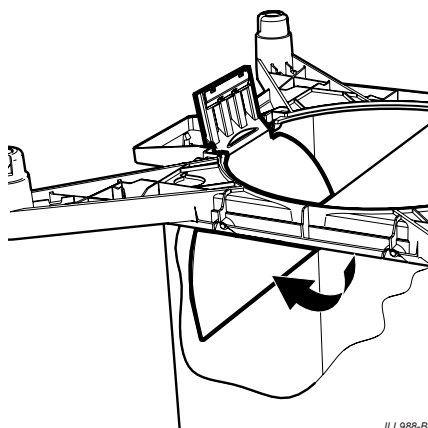
FITTING THE WEATHERSEAL (OPTIONAL)

21 5/8" X 21 5/8" ONLY

Use the instructions supplied in the Weatherseal Kit. Break off both clips on the transition that retain the Weatherseal flaps. Ensure that the Weatherseal flaps open all the way and do not interfere with the dropper or any screws. The flaps should move freely through 90°.



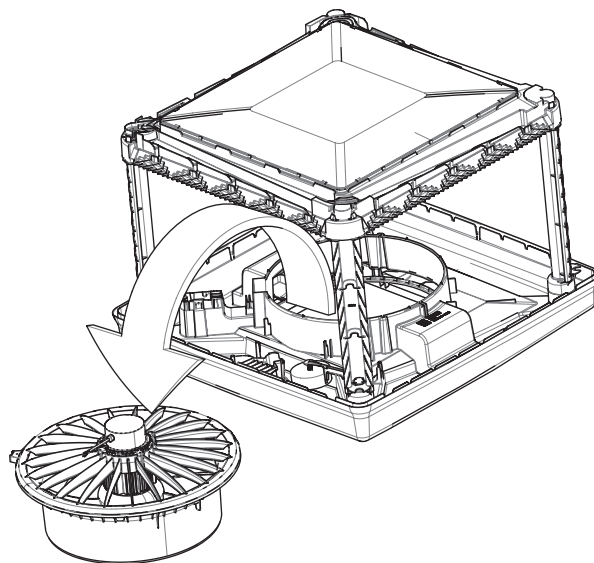
Important! There must be no obstructions to the Weatherseal opening fully as it will adversely affect the performance of the cooler.



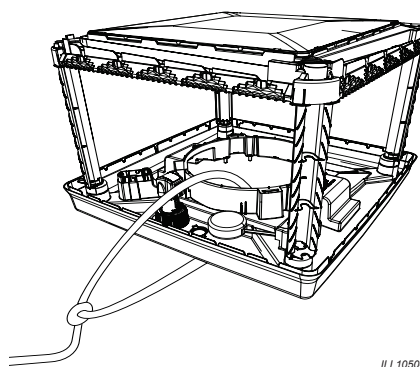
CONVEYING THE COOLER TO THE ROOF

Caution! Do not take risks when raising the cooler to the roof for installation. Use safety equipment, appropriate procedures and always have assistance.

It is recommended that at least 2 people move the cooler into position and that the transition, pad frames, electrical enclosure, venturi assembly and any unsecured objects are removed beforehand.



Carefully convey the cooler to the roof, avoiding scratching the unit and observing any WHS (Safety) requirements. If you use a rope or sling, attach through the central pan (reservoir) hole. Do not use pillars. Do not drop the cooler. Always handle the cooler with care.

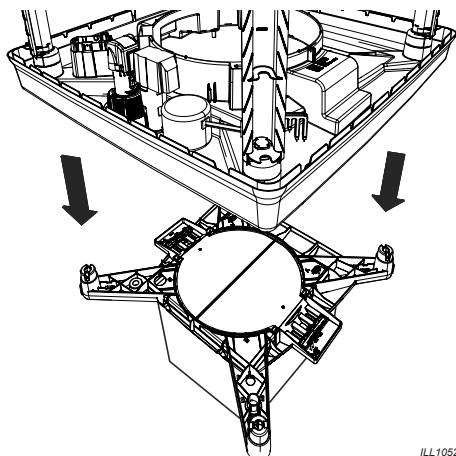


If you intend to pull the cooler onto the roof using a ladder as a slide, then guide the cooler on the underside of the pan (reservoir).

INSTALLATION

MOUNTING THE COOLER

Once the cooler is on the roof, carefully lift the assembly onto the transition and into place. The assembly will only fit onto the transition in one orientation. Refer to the engraved details moulded into the transition.



ILL1052-C

Ensure that the clips in all four corners engage correctly. Do not use any screws to fix the cooler to the transition.

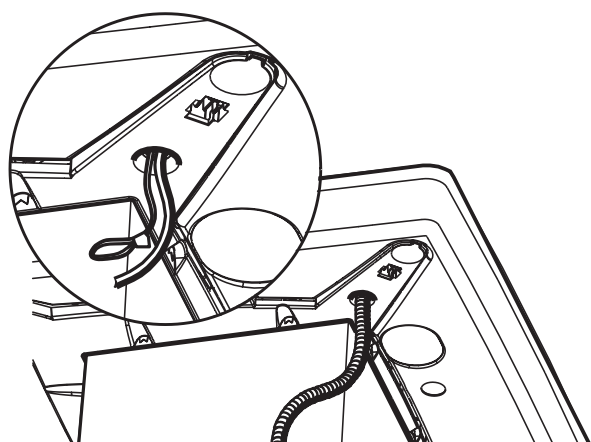
Important! Do not place the venturi assembly into the cooler at this stage.

CABLE INSTALLATION

Your new unit does not include any power or control cables. Mains power and control cables are supplied by the installer or reused from the existing installation.

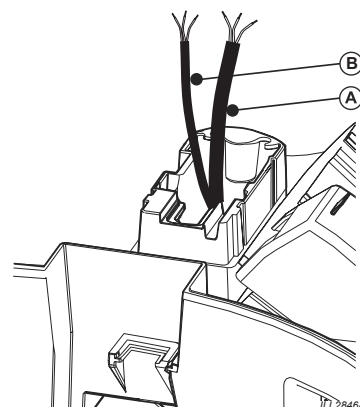
WARNING! Do not let cables, cable ends, or the electrical enclosure get wet.

Pass the conduit/cables through the hole in the bottom of the transition and through the gap where the electrical enclosure was located. Ensure there is a sufficient amount of slack cable inside the unit to be connected to the inside of the electrical enclosure.



COOLER UNDERSIDE

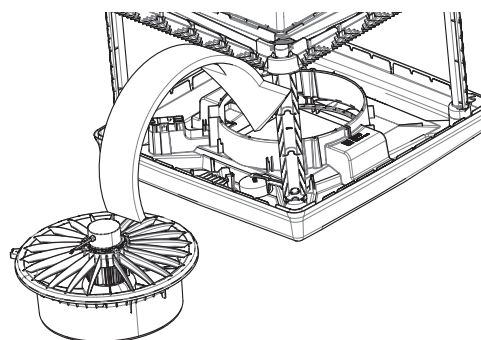
ILL1181-A



ILL2846-A

Ensure the cables are passed through the electrical enclosure mounting area in the pan (reservoir). (Installer supplied or reused from old installation). The cables exit the pan (reservoir) via moulded holes in the transition as shown in the "cooler underside" image.

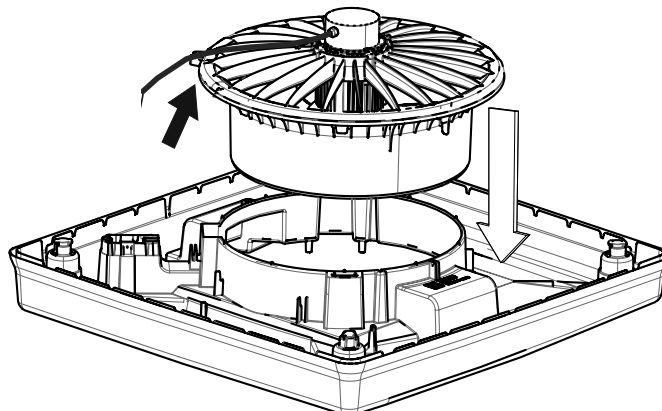
INSTALLING THE VENTURI/FAN ASSEMBLY



ILL2845-B

Important! Make sure the venturi is correctly and symmetrically located all the way around its cavity. Check this by making sure the venturi sits inside the locating ridge all the way around. Ensure the motor lead assembly is not caught under the bottom lip of the venturi by pulling the lead through fully.

Ensure the venturi is sitting flat in the pan (reservoir) by checking all the venturi ribs are in contact with the pad edge. Relocate the tabs on the venturi back into the slots in the pan (reservoir), as it was fitted during transport. The venturi securing screws (x2) do not need to be re-fitted.



ILL2838-A

INSTALLATION

WATER REQUIREMENTS

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

The following specifications for the cooler water supply are required:

Water Connection	½" BSP
Min Water Pressure	15psi (100kPa)
Max Water Pressure	115psi (800kPa)
Min Water Flow	2.1 gallons/min (8 liters/min)
Max Water Temperature	104°F (40°C)

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

A permanent water supply is required to be connected to the cooler. The water connection point is located on the underside of the cooler.

You must install a manual quarter 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.

The water connection is a 1/2" compression fitting or a 1/4" compression fitting. This can fit directly onto the water pipe or be screwed directly onto the manual water shut-off valve.

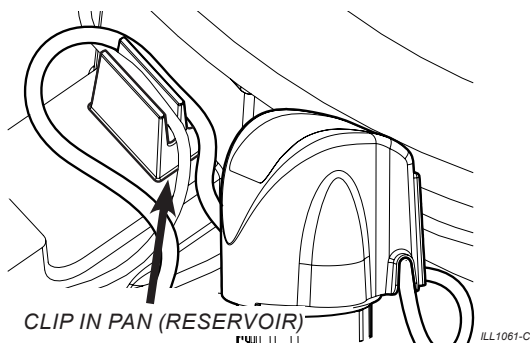
Always ensure that the water pipe connection does not place sideways strain onto the float valve.

Important! In areas subject to freezing, the water supply line to the cooler requires a drain down facility at the lowest point in the water supply pipe.

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

WATER PUMP

Route any of the excess pump cord through the clip as shown.

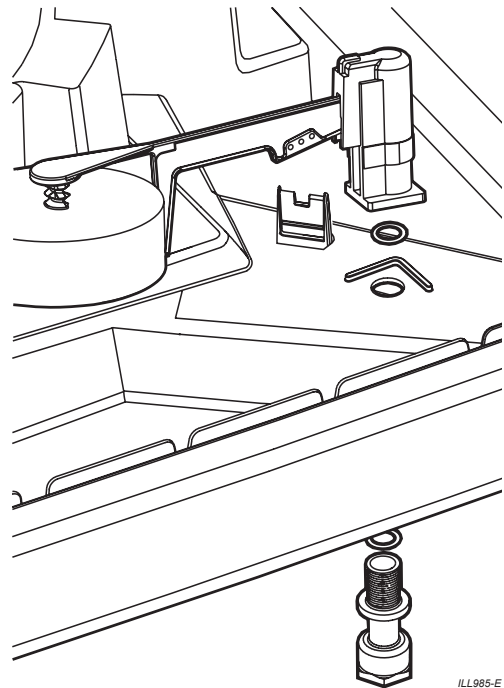


INSTALLING THE FLOAT VALVE

Assemble the float valve to the cooler as shown.

Ensure all washers and (O-rings are in place. No thread tape is required. Do not over-tighten the plastic fittings.

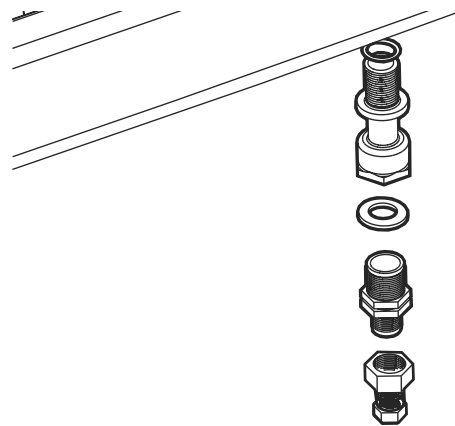
Make sure the float is centrally positioned and up and down movement is unrestricted.



MAINS WATER CONNECTION

Connect the main water supply to the water inlet point under the cooler using the 1/2" Nut and olive fitting or 1/2" - 1/4" brass compression adaptor fitting as required.

Always install a shut-off valve (do not use a non-return type valve) close by the air cooler.

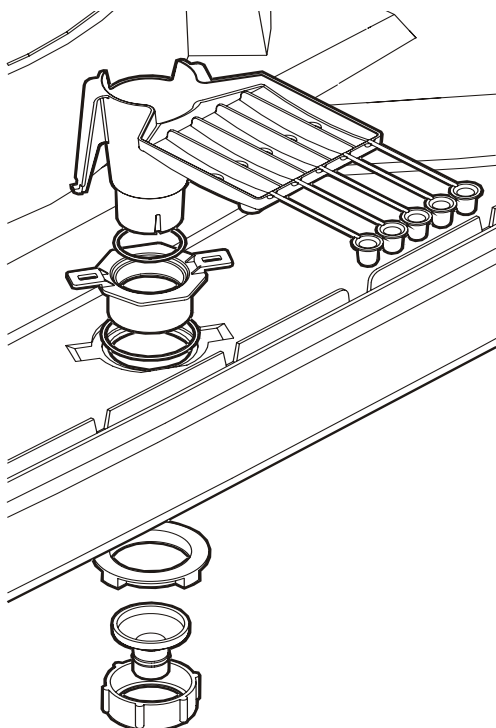


INSTALLATION

BLEED FUNNEL

The bleed funnel reduces the accumulation of salts and minerals in the cooler. It also acts as an overflow and a drain.

Assemble the bleed funnel as shown.



ILL970-C

Make sure the bleed funnel is correctly oriented and that the O-rings are fitted before placing it into the hole. Screw the nut up tightly by hand underneath the cooler.

Make sure that you use the correct drain adaptor. Drain-water from the bleed funnel must be carried away to a suitable discharge point on the building or property in accordance with local regulations. Do not drain directly onto the roof surface.

The bleed rate required will vary according to water quality, but should initially be set to the minimum rate as set out in the table.

Push the remaining plugs into the blind holes provided. In poor quality water areas where the salt and mineral contents are high, adjust the bleed rate by inserting one or more extra plugs than specified in the table.

Note! In some locations due to regulatory requirements, the use of bleed funnels are not allowed. In these locations ensure the plugs are not inserted or are removed from the bleed funnel entirely.

CTA250	CTA500
1 Plug	2 Plugs

ELECTRICAL REQUIREMENTS

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

Important! It is a requirement of Seeley International that all coolers be connected to a dedicated circuit to the distribution board, with a separate circuit breaker and incorporate a separate isolation switch in accordance with the local wiring rules.

The following specifications for the cooler electrical supply are required: **115V/60Hz Single Phase**.

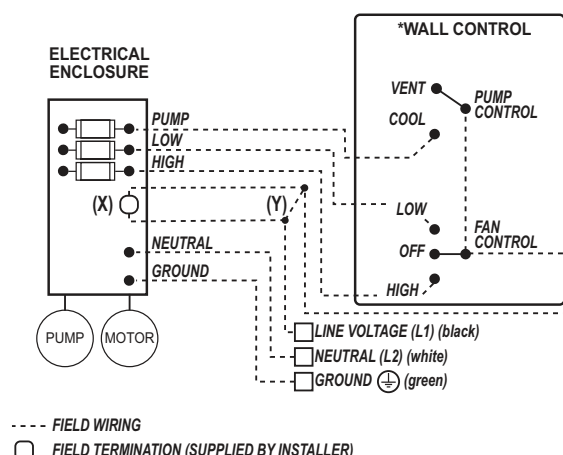
It is up to the installer to provide a controller and mains power should be wired through the controller. A system wiring diagram is provided below:

- Line voltage wired to cooler: an insulated field termination (supplied by the installer) is to be installed in the electrical enclosure. Refer circuit (X) below.
- Line voltage wired to controller: live voltage is wired directly to controller. Refer circuit (Y) below.

WIRING DIAGRAM

2 SPEED SINGLE PHASE 115V 60 Hz

*Wall control not provided by Seeley International. Wiring may change depending on the type/brand of controller used.



ILL3418-C

The electrical enclosure contains three separate 3AG/3AB slow blow fuses for over current protection on each of the active lines for High/Low Speed and the Pump which are contained within the electrical enclosure. The fuse ratings are as follows:

	CTA500	CTA250
HIGH	15A	8A
LOW	10A	4A
PUMP	3A	3A

FITTING THE PURGE PUMP (OPTIONAL)

Important - Use only Seeley recommended purge pumps purchased from your local HVAC supplier

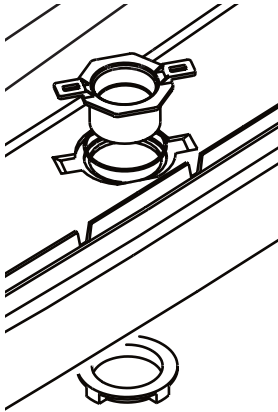
- DIAL 115V Power Clean (1540 & 1541)
- MasterCool CM120 or MCP44

Ensure power and water have been isolated and pad frames have been removed before beginning installation.

INSTALLATION

In place of the Bleed Funnel, install the drain plug provided with the purge pump kit.

Attach the supplied bracket to your purchased purge pump using the screw on top supplied with the pump. Locate the purge pump above the drain plug and secure in place to the venturi using the screw provided.



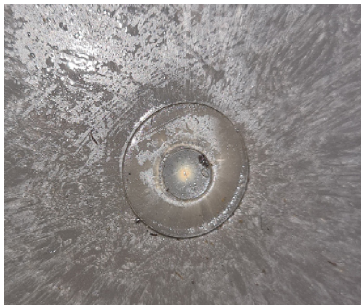
ILL2480-A



ILL4000-A

Create a new drain point, place Ø1" hole located near the float valve. Use the existing moulding mark as a guide. Install the overflow tube in the new hole and connect to the purge pump using the pipe provided with the purge pump.

MOULDING MARK



ILL4001-A



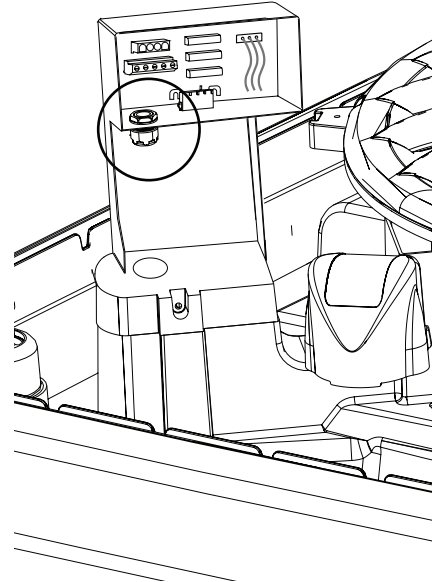
ILL4002-A

The drain water from the overflow tube must be carried away to a suitable discharge point on the building or property in accordance with local regulations. Do not drain directly onto the roof surface.

Insert the purge pump plug into the electrical box and reconnect the cooler pump into the purge pump piggyback socket. Test purge pump operation and check for any leaks.

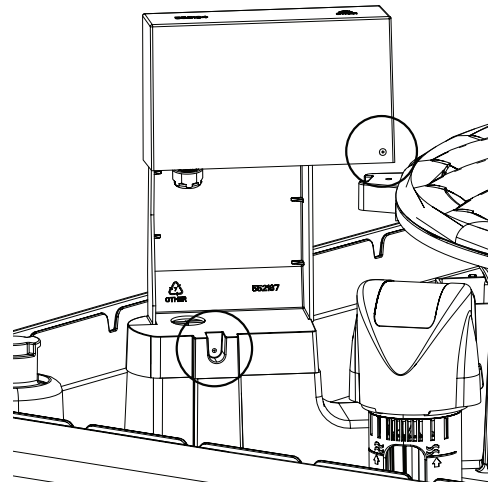
MAINS CONNECTION

When connecting the controller/mains power to the unit, pass the cable through the cable gland attached to the enclosure. The ends of the cable should be stripped back.



ILL2916-C

Insert the cable into its corresponding position on the PCBA connector. Use a small flat blade screw driver to the conductor clamps to secure the cable.



ILL3972-A

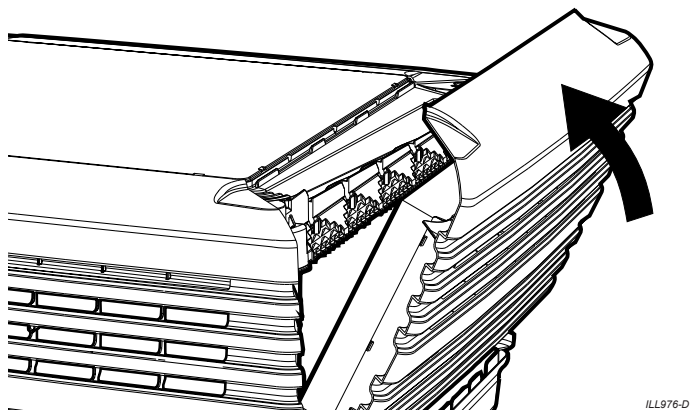
When complete, lock the conduit into the gland. Fit the electrical enclosure onto the pan mounting and screw into place.

Fit the cover onto the electrical enclosure and screw into place

COMMISSIONING THE COOLER

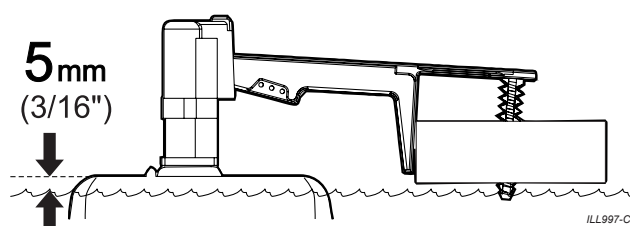
REFITTING THE PAD FRAMES

Refit the pad frames by locating the bottom edge in the pan (reservoir) groove, then push the top into the lid.

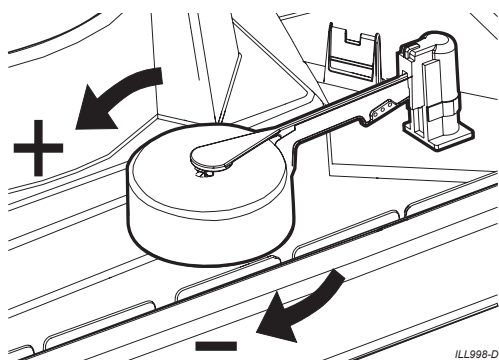


SETTING THE WATER LEVEL

Allow the pan (reservoir) to fill with water. The float valve will eventually stop the water from entering the cooler. Wait for this to happen and check the water level.



If the level is too high rotate the float clockwise. Drain some water from the pan (reservoir) and allow it to refill to the new set point. If too low rotate the float in a counter-clockwise direction. The correct water level is approximately 5mm below the surface of the pan (reservoir) the float valve is mounted on. It is advisable to check the water level again after the float valve washer has "bedded in".



Once the water level is set correctly, isolate the electrical enclosure.

Important! Do not connect the power until the water level is set.

WARNING! Do not run the pump while the pad frames are off and the fan is on.

COMMISSIONING THE COOLER

COMMISSIONING COMPLETION CHECKLIST

COOLER

- ☐ SECURE - The cooler is secure and level on the roof jack using all fixings supplied.
- ☐ SEALED - The roof jack and all penetrations are correctly flashed and sealed.

PLUMBING

- ☐ FLUSHED - The water pipes were flushed of any foreign materials before connection to the cooler was made.
- ☐ NO EXTERNAL LEAKS - The water is connected with no leaks at fittings.
- ☐ NO INTERNAL LEAKS - Check the internal water hose is securely fitted to water distribution spreader on the lid and to the pump.
- ☐ SECURE - Water pipes are correctly saddled as per plumbing regulations.
- ☐ OWNER INSTRUCTIONS - The owner has been instructed on how to isolate the water to the system in case of emergency.

BLEED FUNNEL

- ☐ INSTALLED - The drain valve is installed correctly, as detailed in this installation manual.
- ☐ DISCHARGE - The drain water does not discharge onto the roof surface.
- ☐ WATER LEVEL - Water level has been set correctly, as detailed in this installation manual.
- ☐ TESTED - Drain the pan (reservoir) manually. Check the drain fittings and pipes, making sure there are no leaks.

POWER

- ☐ REGULATIONS - The power supply adheres to all local and national regulations and is wired back to the distribution board on its own separate circuit.
- ☐ CHECK CABLES - Cables have been correctly connected to the control boxes:
 - ☐ Power supply
 - ☐ Motor cable(s)
 - ☐ Pump cable
- ☐ OWNER INSTRUCTIONS - The owner has been instructed how to electrically isolate the unit at the meter box in case of an emergency.

ROOF DUCTWORK

- ☐ NO LEAKS - All ductworks are hung correctly and there are no air leaks.
- ☐ QUIET - Check that the cooler runs quietly and with an even distribution of air to all outlets.
- ☐ AIR BALANCE – The air balance for all outlets has been adjusted to the customer's satisfaction.

FLUSHING CHILLCEL PADS

- ☐ PADS FLUSHED - To prevent initial start-up odours from the cooling pads, it is a requirement to flush water through them and drain the pan (reservoir). Operate in PUMP or COOL mode on low speed for 5 minutes, then drain the pan (reservoir). Repeat several times if necessary.

FINAL TEST

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

CUSTOMER HANDOVER

- ☐ Principles of Ducted Evaporative Cooling explained.
- ☐ How far the windows need to be opened.
- ☐ How to turn the cooler on.
- ☐ How to operate the controller.
- ☐ How to drain the cooler.
- ☐ How to turn the power and water off.
- ☐ Maintenance requirements.
- ☐ The customer has been given the Owner's Manuals & Warranty Card.

CLEAN-UP

- ☐ All the installation rubbish has been removed and, if applicable, any property damage repaired. The customer should not be able to tell you were there, besides placement of the new equipment.

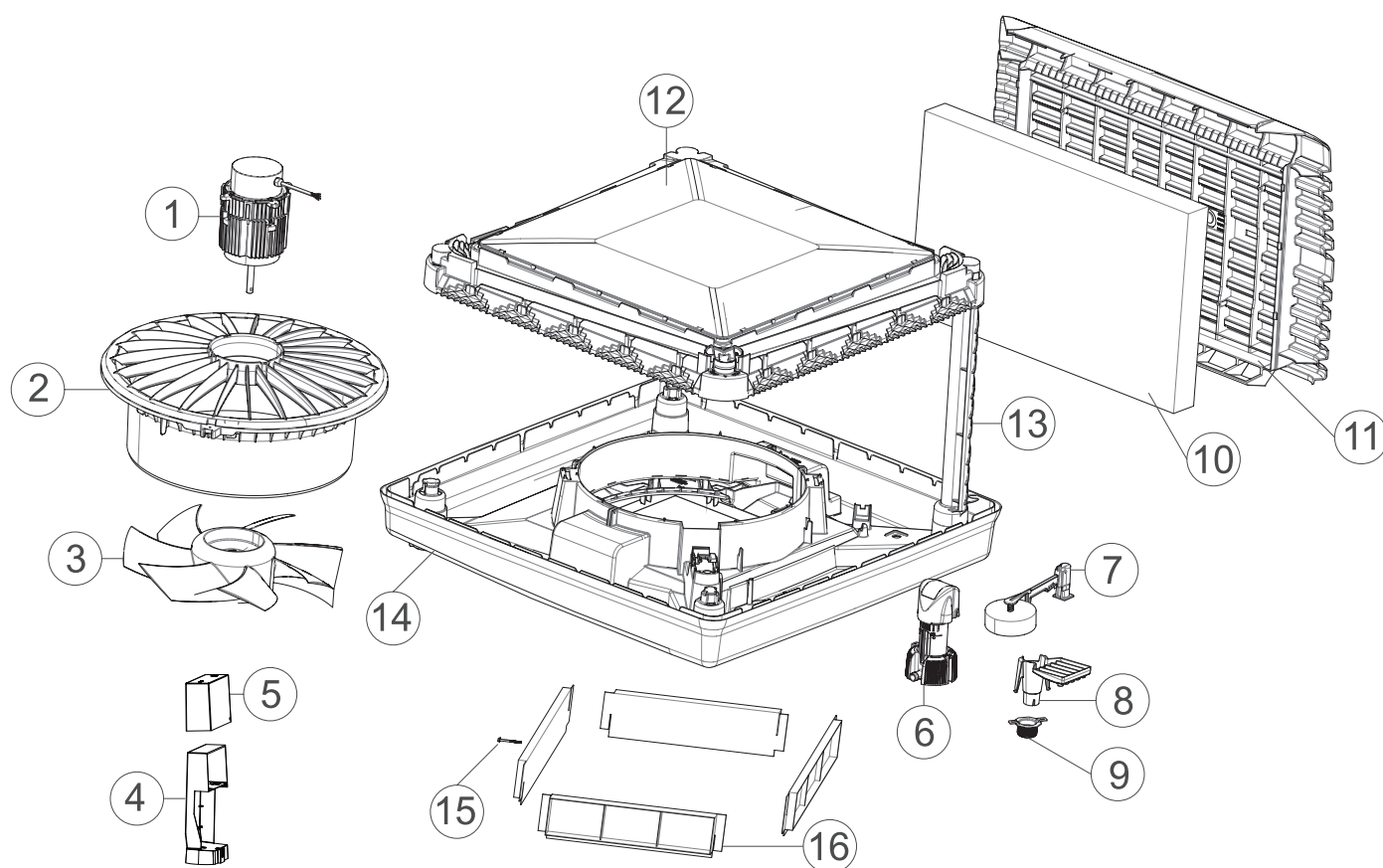
FINAL CHECK

- ☐ With all side panels in place and the unit running for a short period in cooling mode, ensure all pads have even water saturation and there are no visible water leaks

TROUBLE SHOOTING

Symptom	Cause	Action
Inadequate cooling	Under-sized cooler.	Replace with larger cooler.
	Under-sized ductwork.	Carry out cooling load design to determine correct size unit, ducting and outlets required.
	Clogged or dirty cooling pads.	Clean or replace pads.
	Dry pads 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).
	Excessive ambient humidity (see also item above regarding 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 except to shut off the pump.
Noisy cooler	Fan out of balance due to dirt, etc.	Clean the fan.
	Too much back pressure. Tight ductwork bends. Grilles too small.	Re-evaluate design; improve ducting layout; change grille sizes.
Pump fails to operate	Fuse blown	Check pump for faults. Replace fuse.
	Pump motor failure.	Replace pump.
Fan fails to start	Motor fuse blown	Check cause of overload. Replace fuse
	Fan motor burned out.	Replace motor.
	Low system voltage.	Consult with power supply authority.
Pump runs but no water circulation or Pump runs but pads lack water	Insufficient water in pan (reservoir).	Adjust float level.
	Water blocked.	Check and clean out blockage.
	Pump strainer blocked.	Clean pump strainer.
	Insufficient water supply pressure.	Check and confirm water supply pressure
Continuous overflow of water	Float valve adjustment not correct.	Adjust float valve.
	Heavy pad deposits.	Clean or replace pads.
Water entering cooler outlet	Loose water hose connections.	Tighten connections.
	Water hose broken.	Replace cracked or broken hoses.
	Cover not fitted on float valve.	Replace float valve.
	Pads not fitted correctly into pad frames.	Install pad frame correctly.
	Incorrect or damaged pads.	Replace with new Chillcel pads.
Unpleasant odour	New cooler pads.	Fill pan (reservoir), run pump for a short period to wash pads, drain pan (reservoir), refill and repeat several times if odour persists. Odour will dissipate after a number of hours of operation.
	Cooler located near source of unpleasant odour.	Remove source of odour or relocate cooler.
	Algae in pan (reservoir) water.	Drain pan, clean thoroughly with strong cleansing agent, refill, change pads.
	Pads remain wet after shut down.	Run fan on "vent/fan" for 10 minutes after cooling cycle to dry pads out.
	Heavy pad deposits.	Clean or replace pads.

EXPLODED VIEW



ILL2840-A

Part ID	Description	QTY	CTA250	CTA500
1	Motor	1	872629RP	872612RP
2	Venturi	1	113085	113085
3	Fan	1	560922	560922
4 & 5	Electrical enclosure	1	959949RP	959932RP
6	Pump	1	123219RP	123219RP
7	Float Valve	1	104973	104973
8	Bleed Funnel Assy	1	103259	103259
9	Bush for Bleed Funnel	1	935409	935409
10	Chillcel Pad	4	114590P65	114606P65
11	Pad Frame	4	560670	560731
12	Lid	1	560021	560021
13	Corner Pillar	4	560250	560236
14	Pan (Reservoir)	1	560069B	560069B
15	Installation Screws	8 ea	800707/801124	800707/801124
16	Roof Jack Adaptor	4	529738	529745

USER SAFETY

IMPORTANT SAFETY INSTRUCTIONS

READ AND SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

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

- a) Use this unit only in a manner intended by the manufacturer. If you have questions, contact the manufacturer.
- b) Before servicing or cleaning 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.

IMPORTANT NOTES!

In areas where temperatures can cause water supply pipes to freeze, a drain down facility should be provided during the installation. This drain down facility must be activated prior to freezing conditions, to avoid possible damage to the cooler components.

New hose sets supplied with the appliance are to be used.

Old hose sets (from previous installations) should not be re-used.

As with any product that has moving parts or is subject to wear and tear, it is **VERY IMPORTANT** that you maintain the product and have it regularly serviced. It is a condition of warranty cover for your product that you comply with all of the maintenance and service requirements set out in the Owner's Manual. Compliance with these requirements will prolong the life of your product. Further, it is also a condition of warranty cover that each item in the Maintenance Schedule in the Owner's Manual is performed with the frequency indicated, by a qualified, licensed technician, and that the Maintenance Schedule is properly filled out (i.e. names, signature, date, and action taken) when the item is completed.

ANY FAILURE TO CARRY OUT THE REQUIRED MAINTENANCE AND SERVICING REQUIREMENTS, AND ANY FAILURE TO PROPERLY FILL OUT THE MAINTENANCE SCHEDULE, WILL VOID YOUR WARRANTY.

OPERATING INSTRUCTIONS

OPERATING YOUR COOLER

At Seeley International, we manufacture evaporative coolers from the highest quality materials, and we have designed the product to provide many years of economical, trouble-free cooling.

To provide efficient cooling or ventilation the building must have sufficient exhaust openings to the outside of the building.

To assist air flow, open windows and doors that are farthest from the outlet vent in each room. In these rooms, provide an exhaust opening 2 times the vent size of the room.

Where the design of the building prevents adequate exhaust, consideration should be given to the provision of mechanical extractions, such as an exhaust fan.

Your installer will provide the control switch for the cooler and explain how to use it.

CONTINUOUS BLEED SYSTEM

During operation, the bleed system will drain small amounts of water. This ensures fresh water is continually added to dilute salt accumulation in the water caused through evaporation. This helps keep the air cooler in good condition and ensure optimum performance. The bleed rate will depend on local operating conditions and will be set by the installer.

HEALTH REGULATIONS

In some regions, regulations require that evaporative air coolers be serviced at specific intervals.

MAINTENANCE

Maintenance Schedule servicing is essential to ensure the cooler operates efficiently for many years. It must be carried out by a qualified, licensed service technician.

It is important to note that all evaporative coolers have components that may need periodic replacement (eg. filter pads, hoses, o-rings etc).

Note! It is important that only new Seeley International factory authorised replacement parts be used in this cooler. Failure to do so may result in voidance of the factory warranty, improper cooler and unsafe operation.

For detailed servicing requirements refer to the Maintenance Schedule section.

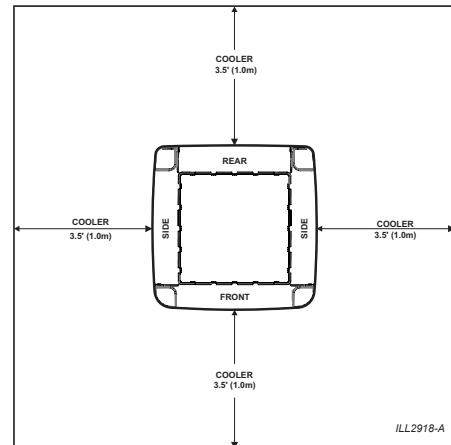
Note! Failure to carry out the Maintenance Schedule services will void your warranty cover.

While installation is not covered by warranty (e.g. duct work, roof penetrations, electrical and water connections etc.), these items should be checked as they can affect the performance (and/or safety) of the cooler.

ACCESS FOR SERVICING AND MAINTENANCE

WARNING! As your cooler is mounted on the roof, we suggest that any maintenance or checks be carried out by an authorised Seeley International dealer or service agent. Climbing onto the roof can be hazardous and could result in injury to you and damage to your property.

Working at heights requires additional safety precautions. Required clearances around the cooler for maintenance and servicing are shown below.



Specific job sites may incur additional charges for servicing in order to provide safe access to the cooler for servicing, which may include, but not limited to sites:-

- with a roof pitch $>30^\circ$
- with limited access to the roof
- where roof material or the condition of does not allow safe access
- where the roof access point is $> 13'$ (4m) above ground level
- where the cooler is located too close to a fall edge
- which are not structurally capable of supporting the weight of the cooler and service technicians

Extra service or warranty charges may apply for the cost of any equipment or additional labour involved in providing safe access to the cooler.

MAINTENANCE

RESIDENTIAL MAINTENANCE SCHEDULE

REQUIREMENTS FOR ALL COOLERS (EVERY 2 YEARS)

Maintenance Schedule servicing should be performed before the summer season. We require that the following components and the operation thereof, be serviced every 2 years for residential purposes.

COMPONENT CHECKS								
Service Item	Action	1	2	3	4	5	6	7
Pad Frames	Check							
	Clean (if required)							
Tank	Check							
	Clean (if required)							
Chillcel Pads	Check							
	Clean (if required)							
	Replace (if required)							
Pad Pins & Washers	Check / Adjust							
	Clean (if required)							
Water Distributors & Hoses	Check / Adjust							
	Clean (if required)							
Pump	Clean Filter							
	Check Operation							
	Replace (if required)							
Drain Valve (if fitted)	Clean							
	Check Operation / Adjust							
	Replace (if required)							
Bleed Funnel (if fitted)	Clean							
	Check Operation							
Solenoid	Check Operation							
	Replace (if required)							
Probe	Clean							
	Check Operation							
	Replace (if required)							
Float Valve	Check Operation / Adjust							
	Replace (if required)							
Motor	Check Operation							
	Replace (if required)							
Fan	Check / Adjust							
	Replace (if required)							
Electronics Box & Cables	Check / Adjust							
	Replace (if required)							
General Product Condition	Check condition and correct fitting of all components. Adjust / replace as required.							

MAINTENANCE

GENERAL INSTALLATION CHECKS							
Action	1	2	3	4	5	6	7
Check electrical connections, isolation switches etc.							
Check water supply, isolation valves etc.							
Check duct, roof penetrations, support frames etc.							
GENERAL OPERATION CHECKS							
Action	1	2	3	4	5	6	7
Ensure no water leaks (internal/external)							
Check water level set point							
Check water fill time							
Check water distribution accross pads							
Check weatherseal operation							
Check airflow through system / outlets (all speeds)							
Check wall control operation (all modes)							

Service No.	Service Date	Service Technician	Service Company
Year 2
Year 4
Year 6

MAINTENANCE

RESIDENTIAL SERVICE RECORD

ADDITIONAL REQUIREMENTS FOR COOLERS WITH BLEED SYSTEM
(EVERY YEAR, BEFORE & AFTER SEASON):

Seasonal Maintenance services must be performed for coolers with a bleed system at a minimum before and after the summer season:

PRE-SEASON	Service Year						
Action	1A	2A	3A	4A	5A	6A	7A
Chillcel Pads - Clean or replace (if required).							
Pad Frames - Clean.							
Float Valve - Check operation							
Check for leaks							
Turn on water supply							
END OF SEASON	Service Year						
Action	1B	2B	3B	4B	5B	6B	7B
Turn off water supply							
Water distributors - Clean							
Tank - Drain & clean							
Pump - Clean							
Probe - Clean							
Bleed Funnel & O-ring - Remove & retain for next season							

Service No.	Service Date	Service Technician	Service Company
Year 1A
Year 1B
Year 2A
Year 2B
Year 3A
Year 3B
Year 4A
Year 4B
Year 5A
Year 5B
Year 6A
Year 6B
Year 7A
Year 7B

MAINTENANCE

COMMERCIAL / INDUSTRIAL MAINTENANCE SCHEDULE

REQUIREMENTS FOR ALL COOLERS (EVERY 3 MONTHS OR TWICE PER YEAR)

Maintenance Schedule servicing should be performed before and after the summer season. We require that the following components and the operation thereof, be serviced a minimum of twice a year for commercial/industrial purpose.

For installations with **high operation hours** (coolers operating more than 800hrs per 3 months) or where regional regulations dictate, additional 3 monthly maintenance of these components is required for the period the cooler is being used throughout the year.

***Additional Note:** In areas with airborne dust, contaminants or debris, cleaning of the tank and cooling pads is required every 3 months.

		Service Year / Quarter							
COMPONENT CHECKS		1				2			
Service Item	Action	A	B	C	D	A	B	C	D
Pad Frames	Check								
	Clean (if required)								
Tank*	Check								
	Clean (if required)								
Chillcel Pads*	Check								
	Clean (if required)								
	Replace (if required)								
Pad Pins & Washers	Check / Adjust								
	Clean (if required)								
Water Distributors & Hoses	Check / Adjust								
	Clean (if required)								
Pump	Clean Filter								
	Check Operation								
	Replace (if required)								
Drain Valve (if fitted)	Clean								
	Check Operation / Adjust								
	Replace (if required)								
Bleed Funnel (if fitted)	Clean								
	Check Operation								
Solenoid	Check Operation								
	Replace (if required)								
Probe	Clean								
	Check Operation								
	Replace (if required)								
Float Valve	Check Operation / Adjust								
	Replace (if required)								
Motor	Check Operation								
	Replace (if required)								

MAINTENANCE

COMMERCIAL/INDUSTRIAL MAINTENANCE SCHEDULE CONT.

		Service Year / Quarter							
COMPONENT CHECKS		1				2			
Service Item	Action	A	B	C	D	A	B	C	D
Fan	Check / Adjust								
	Replace (if required)								
Fan Grub Screw (LCQI/TBQI/LCSI/TBSI models)	Check / Adjust								
Electronics Box & Cables	Check / Adjust								
	Replace (if required)								
General Product Condition	Check condition and correct fitting of all components. Adjust / replace as required.								

GENERAL INSTALLATION CHECKS		1				2			
Action		A	B	C	D	A	B	C	D
Check electrical connections, isolation switches etc.									
Check water supply, isolation valves etc.									
Check duct, roof penetrations, support frames etc.									
GENERAL OPERATION CHECKS		1				2			
Action		A	B	C	D	A	B	C	D
Ensure no water leaks (internal/external)									
Check water level set point									
Check water fill time									
Check water distribution accross pads									
Check weatherseal operation									
Check airflow through system / outlets (all speeds)									
Check wall control operation (all modes)									

ADDITIONAL REQUIREMENTS FOR HIGH OPERATION HOURS (EVERY YEAR)

The following additional maintenance program is required for coolers operating more than 3200hrs per year (i.e. equivalent of more than 8 hours per day, continuously throughout the year).

12 MONTH ADDITIONAL MAINTENANCE		Service Year	
Service Item	Action	1A	2A
Fan & Motor Collet (CPQ/LCQ/LCS/TBA/ TBQ/TBS models only)	Replace		
Motor Shaft	Check for wear		
	Replace if required		

MAINTENANCE

COMMERCIAL / INDUSTRIAL MAINTENANCE SCHEDULE CONT.

COMMERCIAL SERVICE RECORD

Service No.	Service Date	Service Technician	Service Company
Year 1 (1st)
Year 1 (2nd)
Year 1 (3rd)
Year 1 (4th)
Year 1A
Year 2 (1st)
Year 2 (2nd)
Year 2 (3rd)
Year 2 (4th)
Year 2A

NOTES

Cooler Installation Manuals

Now provided on the internet
available in English and Spanish
Refer www.seeleyinternational.com

Spanish

Manual de la Instalación del climatizador
ahora proporcionado en el Internet.



Service - All regions other than Australia: Please contact your local distributor.

seeleyinternational.com

MANUFACTURED BY: SEELEY INTERNATIONAL PTY LTD
112 O'SULLIVAN BEACH RD, LONSDALE SA, 5160. AUSTRALIA

IMPORTED BY: SEELEY INTERNATIONAL (AMERICAS) LTD
1002 S 56TH AVENUE, SUITE # 101
PHOENIX, ARIZONA 85043, USA

It is the policy of Seeley International to introduce continuous product improvement.
Accordingly, specifications are subject to change without notice.
Please consult with your dealer to confirm the specifications of the model selected.