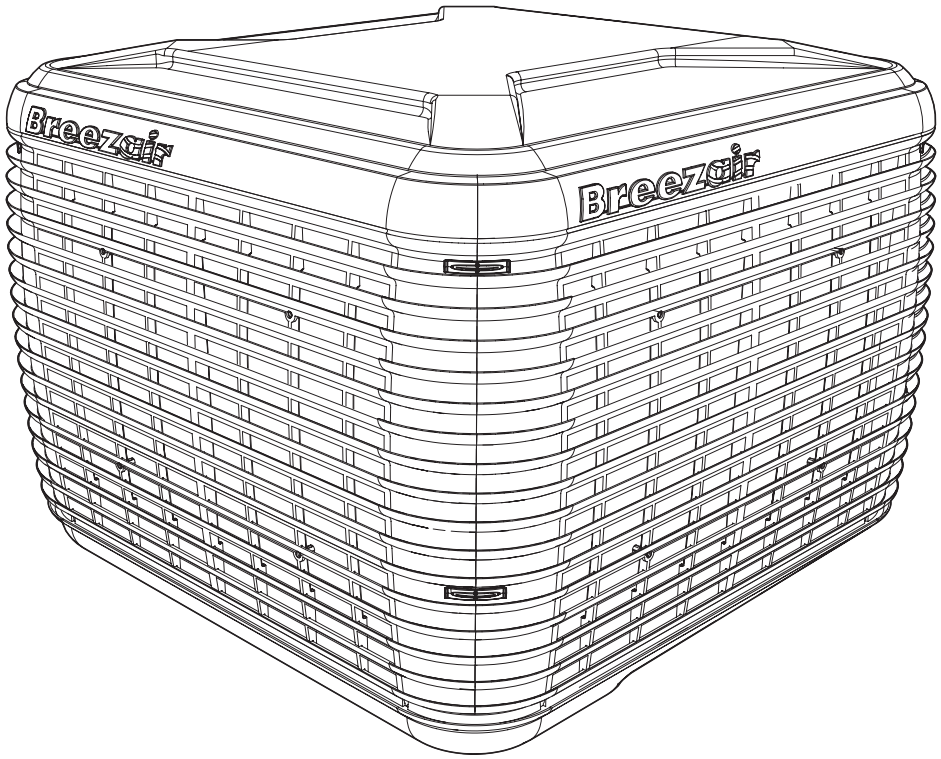
SEELEY INTERNATIONAL

# INSTALLATION & OPERATION MANUAL

## EXT Evaporative Coolers




(English)

Original English Instructions

Breezair By SEELEY INTERNATIONAL

# CONTENTS



**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.

## 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 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.

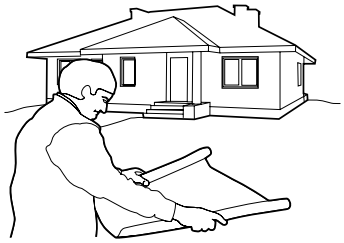
Ensure the installation complies with all local and national regulations with regards to electrical, plumbing and bushfire/ wildfire construction requirements.

# QUICK GUIDE

## STEP 1
### SAFETY
Read & understand the safety section.

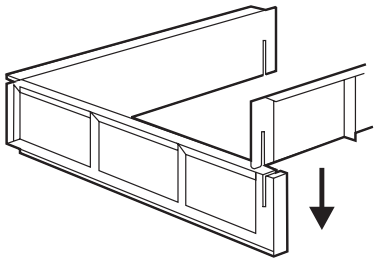
page 1

## STEP 2
### COOLER LOCATION
Check cooler location. Consider regulations. Discuss with customer.



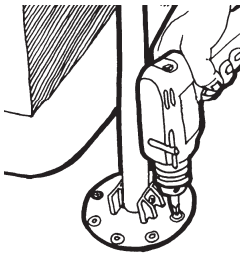
page 4

## STEP 3
### INSTALL ROOFJACK
Install 24G metal roof jack and seal before mounting.



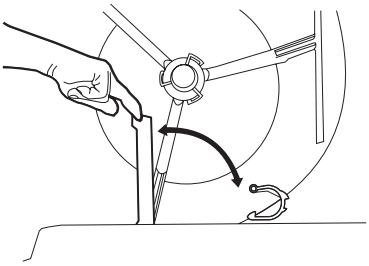
page 5

## STEP 7
### SECURING LEG SUPPORTS
The telescopic leg supports (with feet attached) slide up and down inside the four corner posts.



page 6

## STEP 8
### WEATHERSEAL
Check operation of the Weatherseal



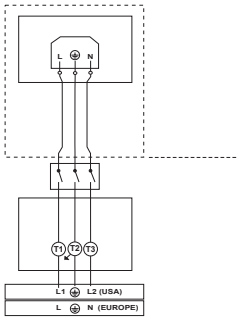
page 6

## STEP 9
### WATER REQUIREMENTS
Installation of the cooler water supply must conform to local plumbing rules, regulations and standards.

| | | |
|---|---|---|
| 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) |

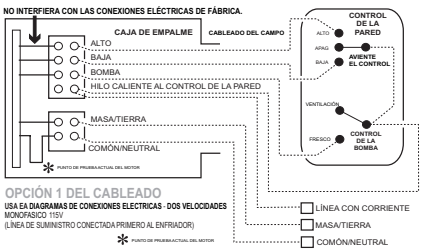
page 7

## STEP 13
### ELECTRICAL REQUIREMENTS



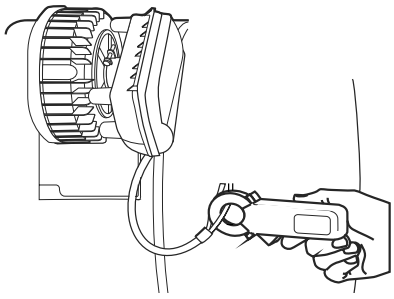

page 9

## STEP 14
### WIRING DIAGRAMS




page 9

## STEP 15
### CHECK MOTOR AMPS



page 11

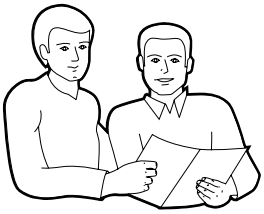
## STEP 22
### FINAL CHECK
Test & complete the commissioning checklist at the end of this document.


page 23

## STEP 23
### CLEAN UP
Clean up the site!

page 23

## STEP 24
### CUSTOMER HANDOVER
Show customer how to operate the cooler. Explain maintenance requirements.

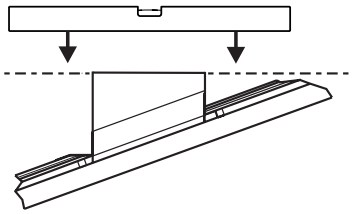


page 23

## QUICK GUIDE

### STEP 4
**LEVEL ROOF JACK**

Position, level, secure and seal the roof jack.

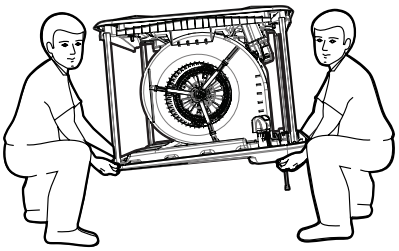


page 5

### STEP 5
**CONVEY COOLER**

Convey the cooler to the roof.

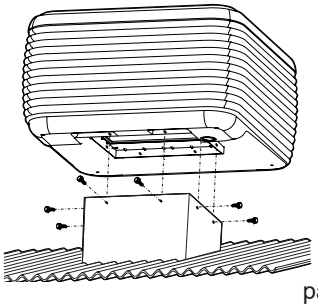
**Note**! Always use 2 people when handling manually.



page 5

### STEP 6
**MOUNT COOLER**

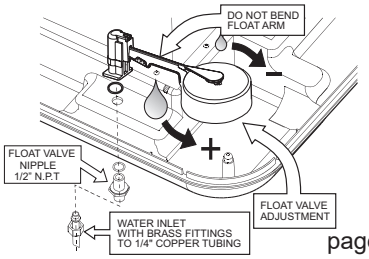
Mount cooler to the dropper.
Check tank (reservoir) is level.



page 5

### STEP 10
**MAINS WATER CONNECTION**

A permanent water supply is required to be connected to the water inlet fitting assembly that is supplied with the cooler.

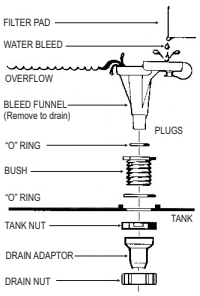



page 7

### STEP 11
**OVERFLOW & BLEED OFF FEATURE**

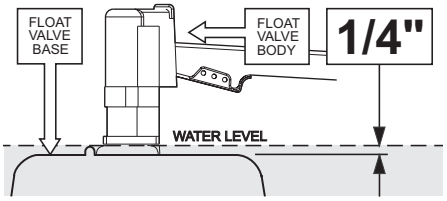
A special "bleed-off" fitting is supplied with the cooler.

It has a 3-fold function: it acts as an overflow, a drain and a bleed-off.



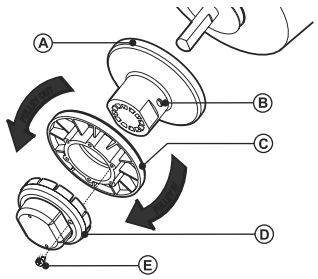

page 7

### STEP 12
**SET THE WATER LEVEL**



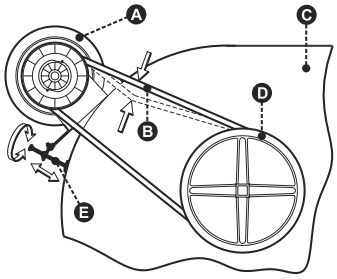

page 8

### STEP 14
**SET MOTOR AMPS**




page 11

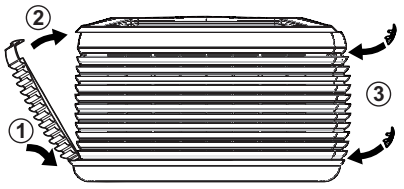
### STEP 15
**ADJUST BELT TENSION**




page 12

### STEP 19
**REFIT PAD FRAMES**

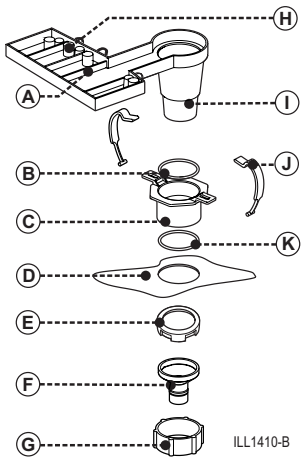
Refit the pad frames before testing the pump.



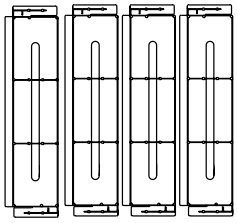

page 22

# INSTALLATION

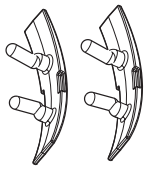
## PACK OUT KIT CONTENTS




A = Ribs
B = O'Ring
C = Bush
D = Tank (reservoir)
E = Tank Nut
F = Drain Adaptor
G = Locking Nut
H = Removable Plugs
I = Bleed Tray
J = Bleed Tray Clips
K = O'Ring



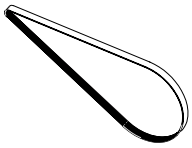
ROOF JACK ADAPTOR



CORNER CLIPS (EXTRAS)

SCREWS FOR FOOT MOUNTS


INSTRUCTION MANUALS, WARRANTY CARD



V-BELT (A57)

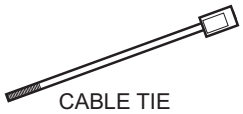
RUBBER WASHER

1/2" BSP NUT & GLAND

SHIELD BLEED STOP

CONDUIT CLAMP

ADAPTOR BRASS ½"BSP to 1/4" COMPRESSION



CABLE TIE

ILL3707-A

## COOLER LOCATION

Check the 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 duct 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.

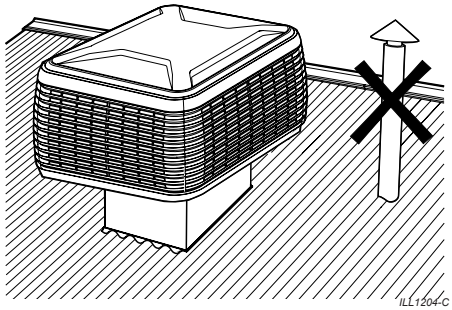
Always locate the cooler where it will receive adequate fresh air and not in a recess where it may be starved for air or where the air is polluted.

**Ensure location is a minimum of:**

- 10' (3m) from a solid fuel heater flue,
- 5' (1.5m) from a gas flue,
- 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.

## MODEL EXT



ILL1204-C

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

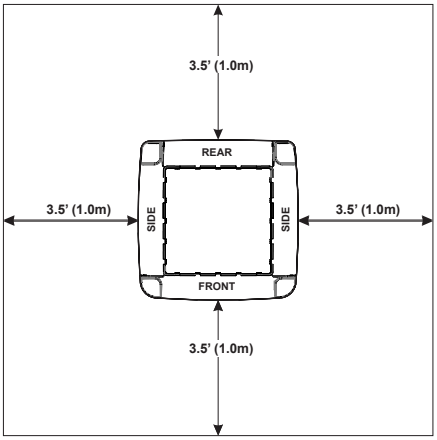
The cooler should be installed in a position that allows adequate access for installation, and future maintenance and servicing activities. This should comply with installation guidelines and any local, State and National regulations.

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' or 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.

# INSTALLATION




ILL2645-B

**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.**

## INSTALLING THE ROOF JACK

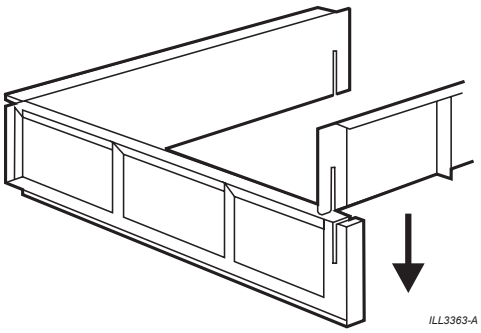
### New Installation

Use 24G or stronger metal roof jack. The cooler may then be attached directly to the jack.

### Replacement Installation

Roof Jack recommended wall thickness should be 24G or stronger. The supplied roof jack adaptor may be required to attach the cooler to the existing roof jack.

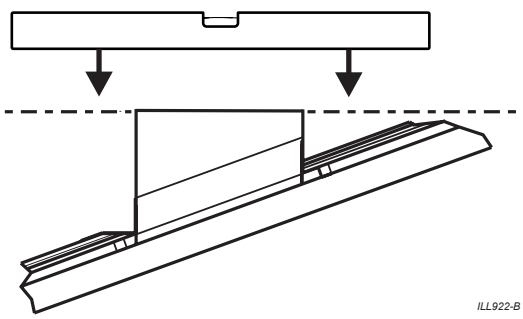
To assemble the roof jack adaptor, hold panels at 90 degrees to one another. Align slots in upper and lower panels then slide together.



ILL3363-A

**Note!** It is recommended that a strip of foam or sealant is applied to the upper flange on the roof jack before securing the cooler to provide an airtight seal.

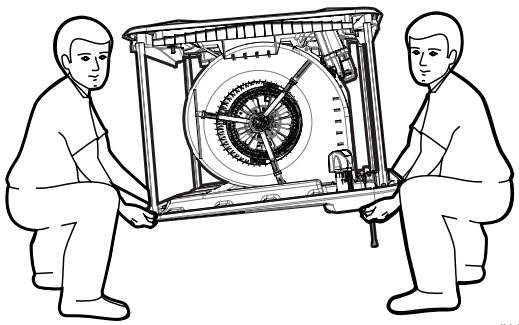
Ensure that the top of the roof jack is level and square in all directions (use a spirit level). This helps with levelling the cooler.



ILL922-B

## CONVEYING THE COOLER TO THE ROOF

Lifting and installing the cooler is made easier by removing the pad frames first. They can be replaced at the very end of the installation procedure.



ILL1901-A

Do not slide the cooler, lift and carry it. It is recommended that at least 2 people carry the cooler whenever it needs to be moved. Do not drop the cooler. Always handle with care.

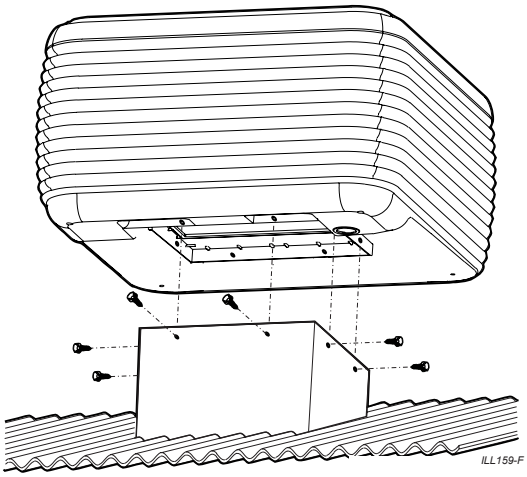
**Important!** For lifting or pulling purposes when using ropes or slings, always apply the ropes around fan housing. Never tie them to any or all of the 4 round corner posts.

**WARNING!** Take care that the ends of ladders, etc. don't penetrate into the opening of the cooler, as the Weatherseal or the cut-off plate may be damaged.

**CAUTION!** Never try to raise the cooler to the roof alone.

## MOUNTING THE COOLER

Locate the cooler on the dropper with the tank (reservoir) sump on the low (gutter) side of the installation.



ILL159-F

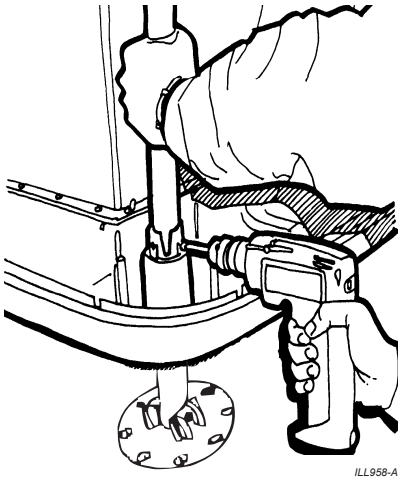
Fix the cooler to the dropper with 8 self-tapping screws provided (2 screws per side). There are ten screw locations identified by "V" notches. If access to the "high roof side" is limited, use 3 screws on each side and 2 on the front. In exposed or high wind areas, seek advice from a structural engineer.

**Important!** Screw length must be less than 1.5" (40mm) to avoid interfering with the weatherseal.

# INSTALLATION

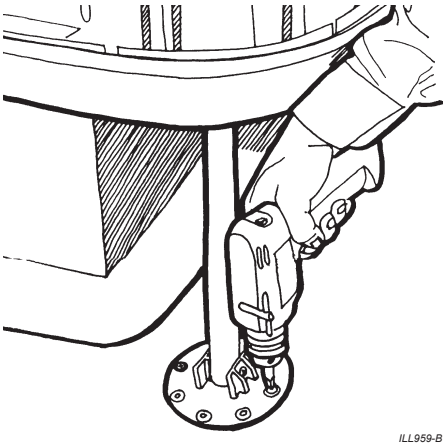
## SECURING THE LEG SUPPORTS

The telescopic leg supports (with feet attached) slide up and down inside the four corner posts. By removing the screw from the lower end of the corner post you enable the leg support to slide down to roof level.



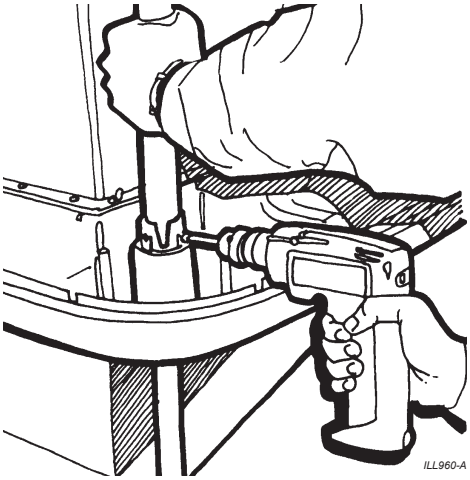
ILL958-A

Make sure each leg is vertical before securing. Secure foot to roof with 2 screws (minimum).



ILL959-B

Maintain downward pressure on corner post as you replace the screw to ensure that the bottom of the corner post is sitting flush with base of corner support (view through “V” notch). Ensure screw is horizontal when replaced.



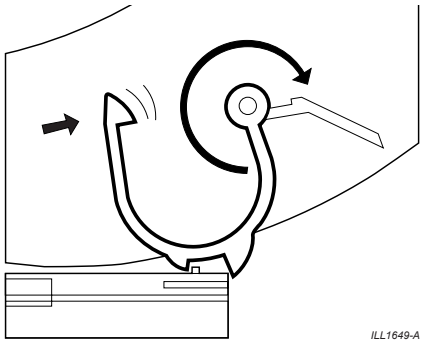
ILL960-A

The support legs are not full weight bearing and are only intended for additional support in case of high winds, etc.

## WEATHERSEAL AND LATCH

(Model dependant, refer to Dealer.)
Where fitted, the Weatherseal latch performs two functions. In the locked position it acts as a latch, preventing movement during transport.

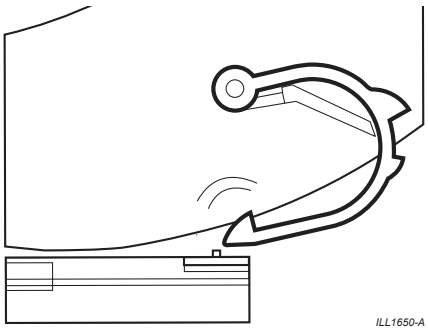
### LOCKED POSITION



ILL1649-A

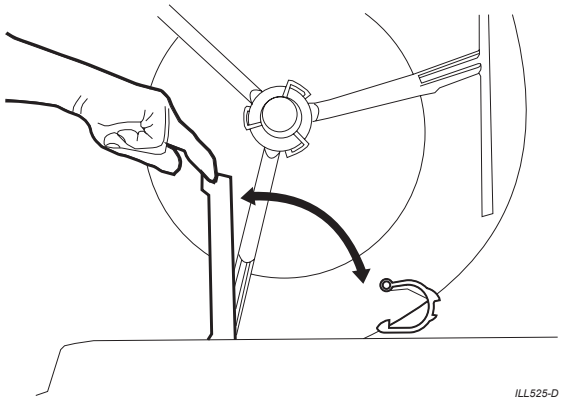
### OPERATING POSITION

In the operating position it acts as a restrainer, preventing gusts of wind from opening the Weatherseal. Once the cooler is installed on the roof, squeeze the latch and rotate it clockwise to its operating position.



ILL1650-A

Check the Weatherseal moves freely and without obstruction by lifting the latch and rotating counterweighted arm.



ILL525-D

# INSTALLATION

## WATER REQUIREMENTS

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

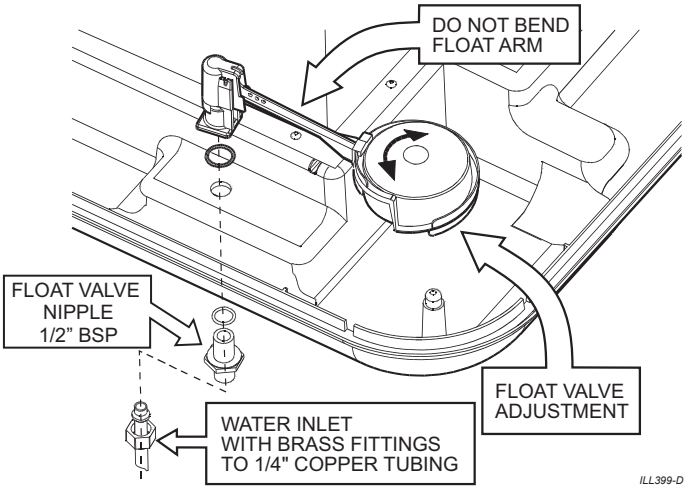
**The following specifications for the cooler water supply are required:**

| | |
|---|---|
| **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.

## WATER CONNECTIONS

A permanent water supply is required to be connected to the float valve inlet fittings leading into the cooler. The water connection point is located on the underside of the cooler tank (reservoir). You must install 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. **DO NOT FIT SHUT OFF VALVES DIRECTLY ONTO THE FLOAT VALVE NIPPLE.**




**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 solenoid and float valve, preventing them from functioning correctly.

## OVERFLOW & BLEED OFF FEATURE

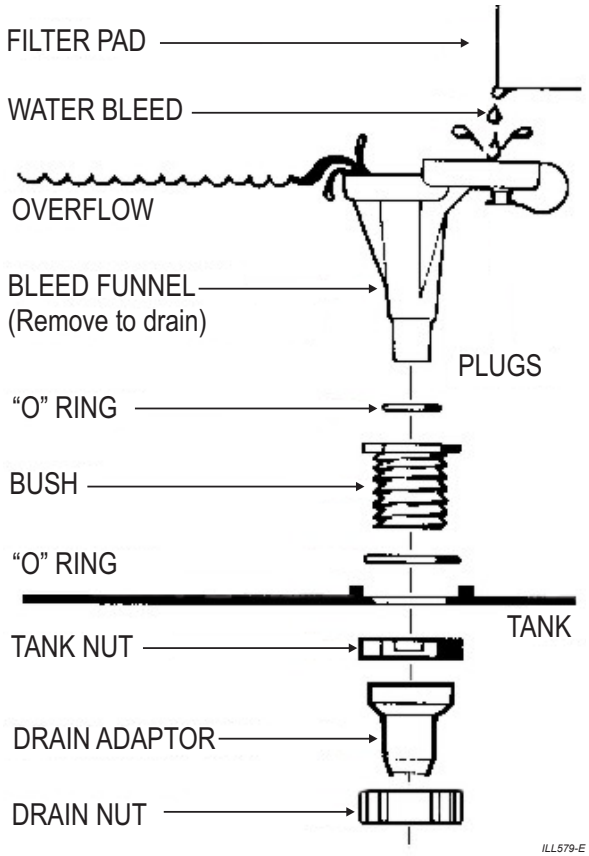
A special "bleed-off" fitting is supplied with the cooler. It has a 3-fold function: it acts as an overflow, a drain and a bleed-off.

If the water level gets too high the excess water overflows into the fitting and away to waste.

If the user wants to drain the tank (reservoir) he can lift the fitting out of the drain hole and the tank water will run away to waste. The bleed function must always be commissioned, except in areas where it is illegal to run water to waste.

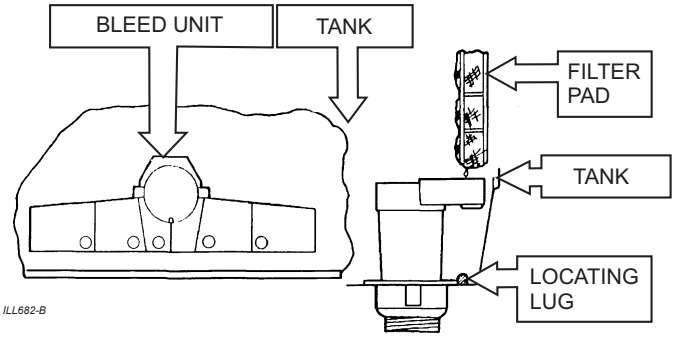
The continuous bleeding of a small amount of water to drain forces fresh water to enter the cooler and reduces the rate at which salt and scale build up on the pads. The bleed-off fitting is inserted into the large hole already formed in the tank.

Screw the tank nut firmly under the tank by hand.



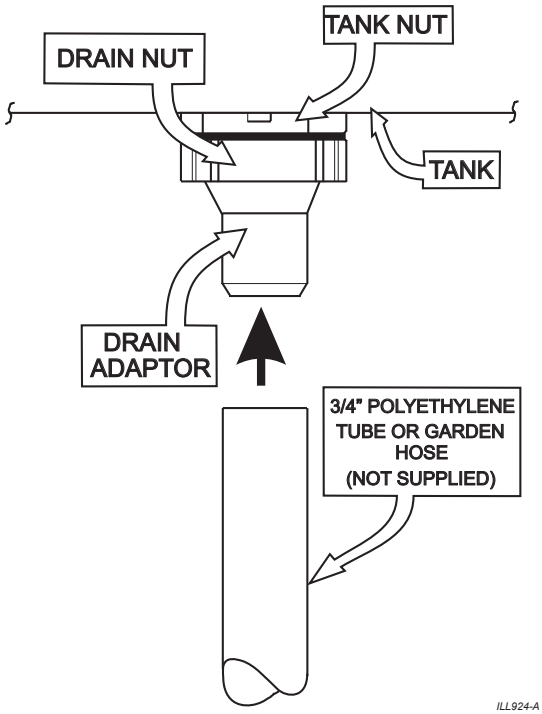

Make sure the fitting is located correctly in relation to the pads and that the large O-ring is on before placing the fitting into the hole in the tank (reservoir).

Secure with clips provided.



## INSTALLATION

The drain adaptor allows the attachment of a ¾" drain hose to run water to a waste point. Attach it to the bleed fitting underneath the tank (reservoir) by using the drain nut.




The bleed rate can be varied according to local conditions. With all the plastic plugs removed from the tray, minimum bleed will occur. Insert plugs to increase the bleed rate to suit your salt build up experience. See heading "Operating Adjustments" for further details.

In those areas where draining of bleed-off water is illegal, the bleed must be disabled.

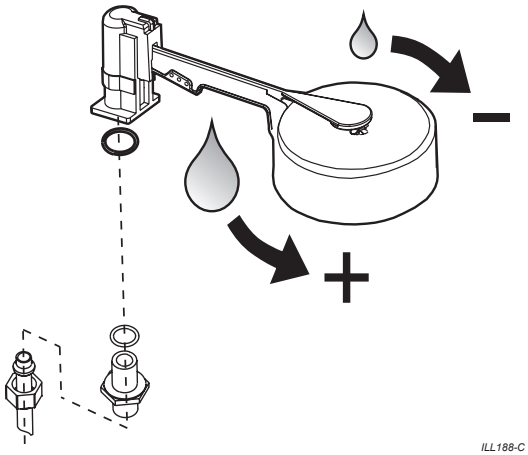
**WARNING!** In cases where bleed-off is not used the pads will require frequent inspection and replacement. Failure to do so may cause water to leak into the building or onto the roof, which may enter electrical components creating an electric shock or fire hazard. Where this condition is allowed to exist, Seeley International (Americas) accepts no responsibility for any damage or injury that might occur.

### SETTING THE WATER LEVEL

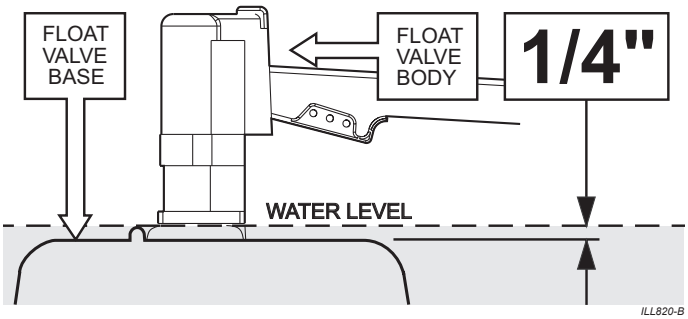
### WATER LEVEL ADJUSTMENTS

The water level in the cooler is important. Adjust the level at the float valve inside the cooler. Rotate the large plastic float CCW or CW to change the level. CW will lower the level; CCW will raise the level.

**NEVER ADJUST THE WATER LEVEL WITH THE COOLER RUNNING because the residual water in the pads and pipes will cause the water to over flow when it runs back into the tank.**

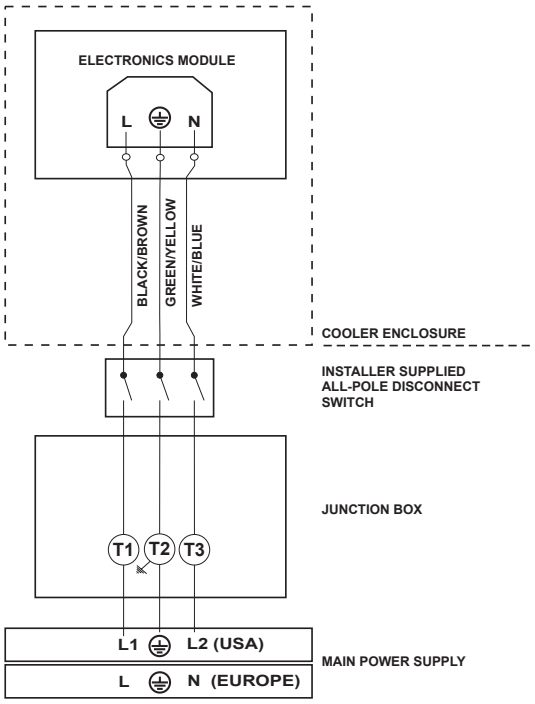



Water level should be about ¼" above the float valve mounting shelf.



# INSTALLATION

## ELECTRICAL REQUIREMENTS




ILL1898-C

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

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

Electrical supply specifications may vary depending on model or region. Please refer to the rating label attached to the cooler for details.

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

**WARNING!** When retro-fitting the cooler to an existing installation always turn off the electrical power at the source of the wiring. **DO NOT TAKE RISKS!** Turn off and tape over the circuit breaker or remove the fuses and keep them with you until the job is complete. Set cooler, isolator switch, wall switch, motor and pump to “off”. Be sure to tell other occupants of the building what you are doing.

The point of entry into the cabinet of the cooler is by knockouts in the tank (reservoir).

Seal the gap between the conduit and the knock-out hole with silicone sealant after making connections and clamping the conduit cable.

**Important!** Ensure that all electrical connections are tight. Loose connections will cause overheating that may lead to machine damage or fire.

Replace all covers on completion of work, using only the screws supplied.

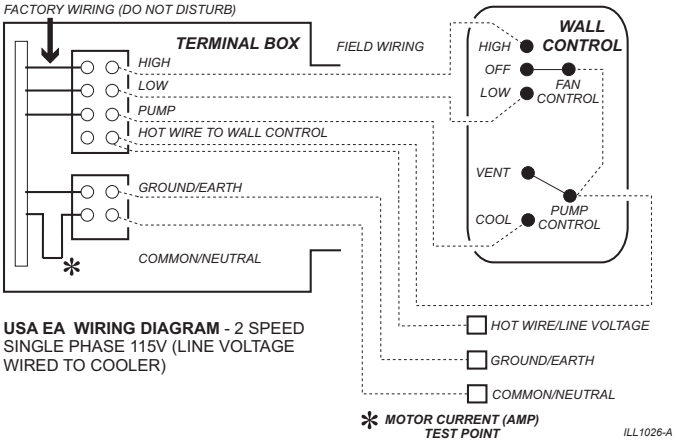
Do not tamper with factory wiring. Before leaving the job, a trained, licensed technician must check that the cooler is operating correctly.

## WIRING DIAGRAMS

### Wiring Option 1

The diagram below shows the field wiring for a 2 speed cooler WITH LINE SUPPLY WIRED FIRST TO THE COOLER (not first to the wall control).

**NOTE!** the cooler must be connected in this way for successful operation of the optional Salinity Manager/Auto-Drain feature, as it requires a constant source of power.



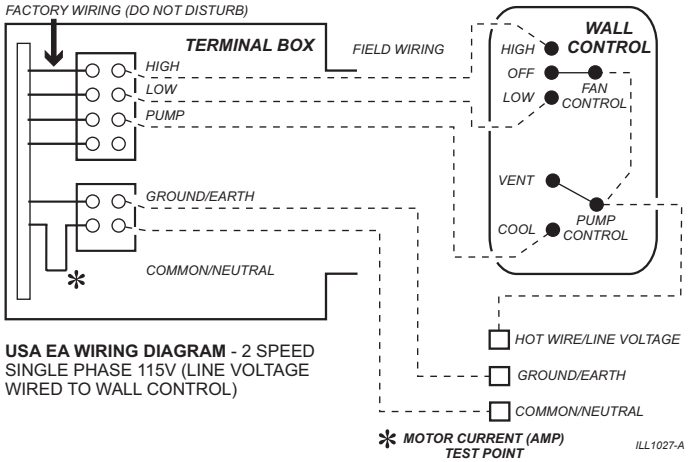

**USA EA WIRING DIAGRAM** - 2 SPEED SINGLE PHASE 115V (LINE VOLTAGE WIRED TO COOLER)

ILL1026-A

### Wiring Option 2

The diagram below shows the field wiring for a 2 speed cooler WITH LINE SUPPLY WIRED FIRST TO THE WALL CONTROL (not first to the cooler).

**NOTE!** Option 2 will not support the optional Salinity Manager/ Auto-Drain feature.




**USA EA WIRING DIAGRAM** - 2 SPEED SINGLE PHASE 115V (LINE VOLTAGE WIRED TO WALL CONTROL)

ILL1027-A

**FOR INFORMATION CONCERNING OTHER WIRING CONFIGURATIONS CALL BREEZAIR TECHNICAL DEPARTMENT. (800) 926-6824**

## INSTALLATION

Wiring to the cooler must be rated at cooler rated amperes or higher, and must be protected by a suitable fuse or circuit breaker. Cables are to be double insulated all the way into the cooler junction box.

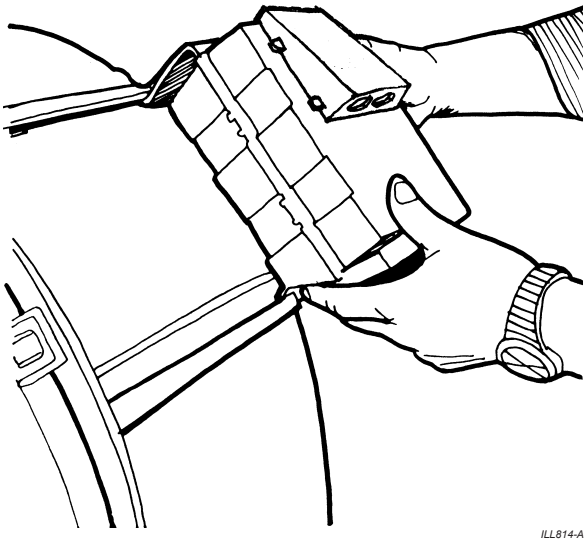
Ensure that all electrical connections are tight. Loose connections will cause overheating that may lead to machine damage or fire.

Replace all covers on completion of the work, using only the screws supplied.

**DO NOT TAMPER WITH FACTORY WIRING.**

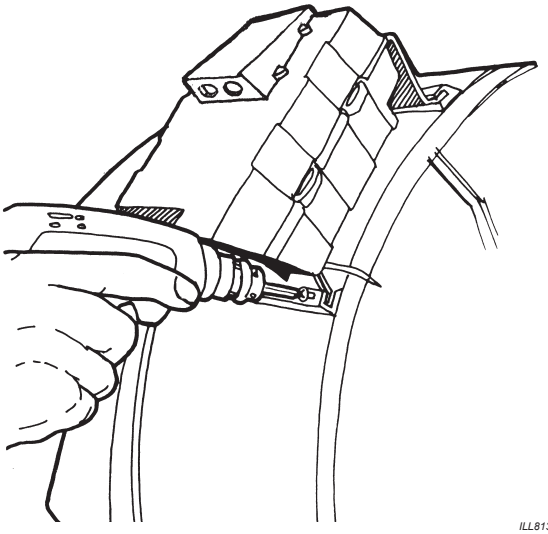
Before leaving the job, a trained, licensed technician must check that the cooler is operating correctly, and must set the motor full load amps using a clip-on ammeter. Make this adjustment at the motor pulley (sheave). See later detail under heading "Operating Adjustments".

The Power Pack fitted in this cooler contains a junction box with main power supply termination box attached.



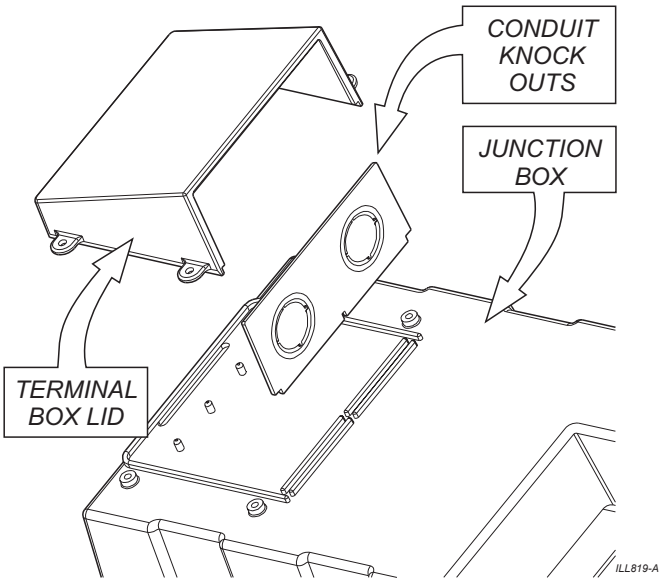
ILL814-A

A screw is required to lock the junction box into position.



ILL813-A

The main power termination box is made in two sections to facilitate easy wiring connections. Knock-outs are provided for ½" conduit. A hole must be drilled for ¾" conduits.



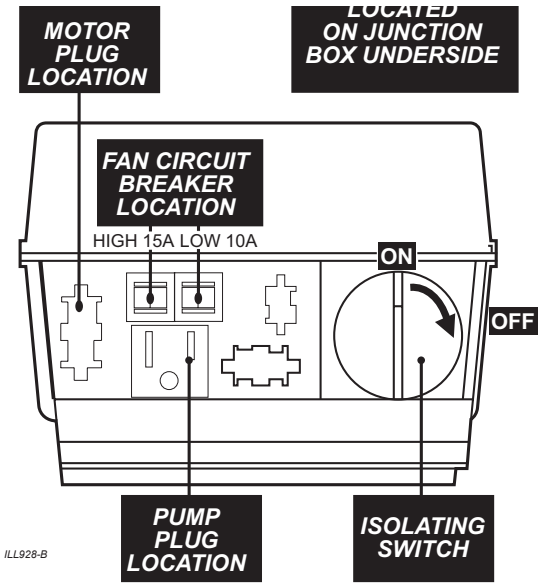

ILL819-A

Connect the power supply and control cables inside this termination box as shown on "WIRING DIAGRAMS" on Page 9.

The junction box is factory sealed; do not attempt to open it; there are no field serviceable parts inside.

The junction box contains plug receptacles for fan motor, water pump, and other optional features if used.

Fan motor amperes must be adjusted before closing the termination box using a clip-on ammeter on the power wires.




ILL928-B

# INSTALLATION

## MOTOR POWER (AMPS)

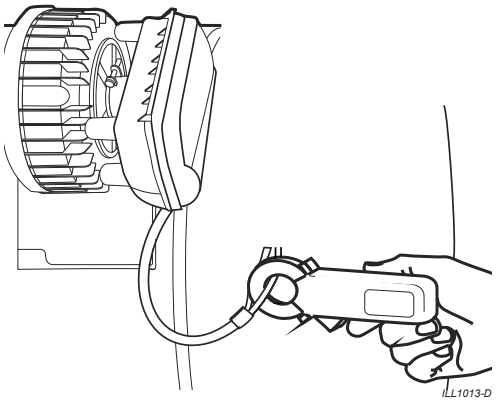
**Important:** Install all the pad frames except the one on the motor side.

Ensure that all intended doors, windows or other means of exhaust are open in the building, and that all outlet grilles are open fully.

**WARNING:** Beware of rotating fan, belt and pulleys whilst making adjustments to motor speed, pulley or belt tension settings. Ensure the cooler is switched OFF via the electronic module isolation switch whilst working inside the cooler.

Set the cooler running at the highest speed for about 10 minutes, or until the motor has reached its normal operating temperature (hot!).Motor load must be checked without the pump running.

Clip your ammeter onto the free cable in the main termination box. This should be done by a trained licensed electrician.




For convenience, the rated motor current, in amps, is printed on a small label attached near the cable fork (in addition to the normal motor nameplate label located at the back of the motor).

Check the measured amps against the motor nameplate amps. If the measured amps are less than the nameplate amps the adjustable motor pulley sheave must be altered to increase the fan speed, thereby delivering the full capability of the cooler to your installation. The measured amps must be equal or close to, but never more than the nameplate amps. (see heading “Pulley Adjustment”)

If the measured amps are greater than the motor nameplate amps the fan **MUST** be slowed down by adjusting the motor pulley sheave in the opposite manner. Failure to do this will cause overheating in the motor and may cause the motor’s thermal protector to trip.

Replace all covers when adjustments are completed using the screws provided.

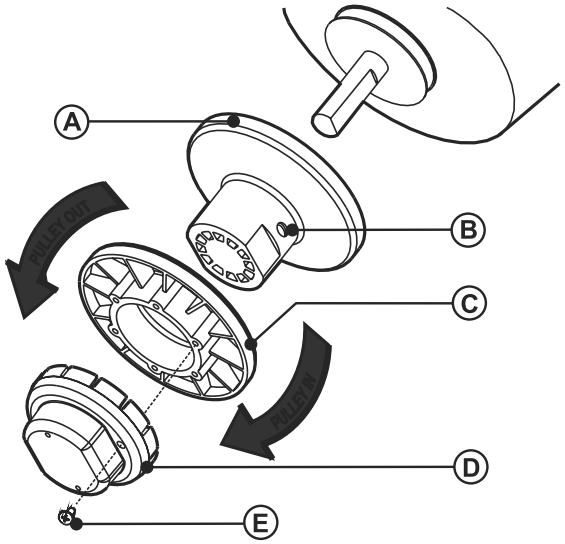
## PULLEY ADJUSTMENT

The motor pulley is adjustable in order to set the motor amperes at the correct (nameplate) level, and thus provide the owner with full machine cooling capacity.

**DO NOT USE THE PULLEY ADJUSTMENT TO SET BELT TENSION**

The adjustment is made with the cooler switched OFF. Never attempt this procedure with the cooler operating.

- Remove the drive belt.
- To increase the fan speed (and therefore the motor amps), the two halves of the pulley must be closer together, ie: turn the adjustable half clockwise.
- To decrease the fan speed (and therefore the motor amps), the two halves of the pulley must be further apart, ie: turn the adjustable half counter-clockwise.




A = Fixed Sheave
B = Grub Screw
C = Adjustable Sheave
D = Locking Cap
E = Locking Cap Screw

ILL1208-D

The outer half of the pulley is on a thread and can be moved in or out by removing the locking cap and then turning the outer half by hand in the desired direction.

When an adjustment is made, replace the locking cap, aligning the screw hole with the nearest hole in the adjustable half. Lock it into place with the securing screw. Refit the belt, reset the belt tension, then run the cooler and check the amps. Repeat the process until the amp level is set.

You can start and stop the cooler for this procedure by using the isolating switch inside the cooler.

# INSTALLATION

## BELT TENSION

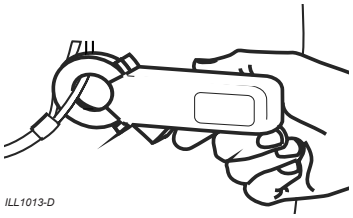
**Belt tension is important!** If it is too tight there will be excessive belt and bearing wear. If it is too loose there will be belt slip, excessive belt wear and loss of cooler performance.

There are two adjuster bolts with locking nuts attached to the motor mounting.

The tension should be adjusted so that the deflection on one side of the belt is 5/8” to 13/16”.

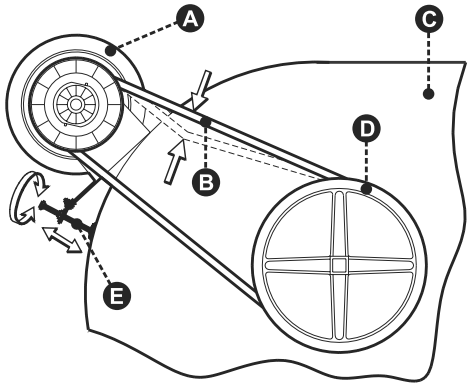
To make the adjustment, loosen the locking nuts and screw the bolts in or out as required to change the belt tension. Re-tighten the locking nuts.

It is important to recheck the motor amps again after re-setting the belt tension.



ILL1013-D

Correct belt tension ensures the belt will not slip. Check the temperature of the belt by hand after each adjustment, by turning off the cooler and holding one side of the belt in your hand. If the belt is warm to touch, it is slipping!
Continue to tighten until it runs cool.



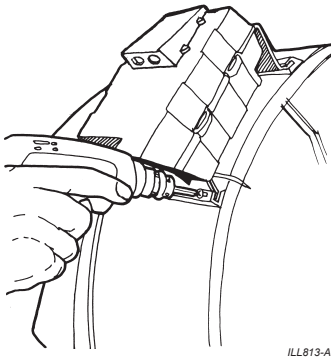

A = Motor
B = Deflection 5/8” - 13/16” (15-20mm) with moderate finger pressure
C = Blower Housing
D = Fan Pulley
E = Belt Tension Adjustment Bolts

ILL034-J

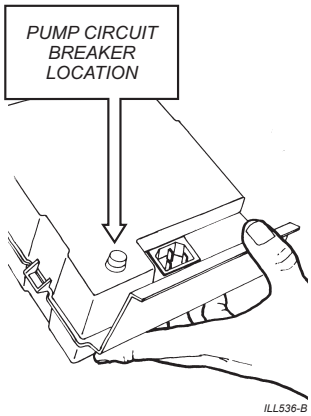
## RESETTING THE PUMP CIRCUIT BREAKER

1. Disconnect power supply at the main panel.
2. Remove the junction box from the blower housing.
3. Invert the junction box and locate the circuit breaker.
4. Press the button until it "clicks" and remains in.
5. Reposition the junction box on the blower housing (ensure locking screw is reinstalled.

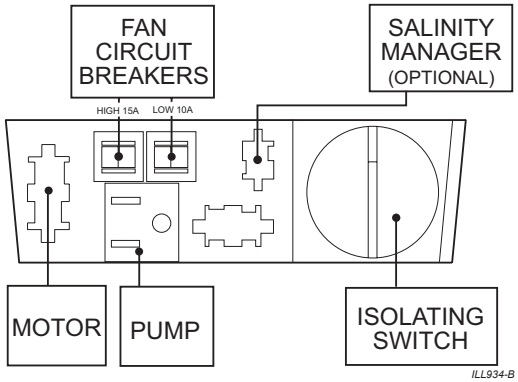
Should a 2 speed motor overload, one of the circuit breakers will trip, showing a white button. To reset, press this white button until it "clicks" and remains in.



ILL813-A




ILL536-B




ILL934-B

# INSTALLATION

## BLEED OFF

See previous heading "Overflow and Bleed-Off feature" under "Water Installation".

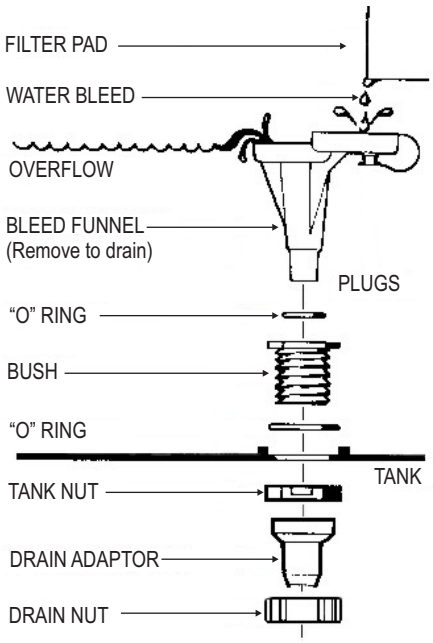
Adjusting the bleed rate is necessary to reduce the salt deposit on the pads. Salt deposit can NEVER be entirely eliminated, only the rate of deposit can be changed. The bleed feature causes some salt concentrated water in the tank (reservoir) to be drained away. Fresh water enters the cooler automatically as the salty water exits.

The rate of bleed will vary according to water quality, but should be set to a minimum rate as set out below:-

**EXT155 (small cabinet): 0.08 gpm**
**EXT265 (large cabinet): 0.13 gpm**

**NOTE!** Bleed adjustment cannot be precise as operating conditions vary continually.

**NOTE!** Previous warning about running coolers without bleed-off.




*ILL579-E*

# COOLER OPERATION

## HELLO AND CONGRATULATIONS ON PURCHASING A SEELEY EVAPORATIVE 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.

## USING YOUR COOLER

Evaporative air coolers always function on 100% fresh outside air. Therefore you must either open doors and windows, or, provide exhaust outlets in the building.

**FAILURE TO PROVIDE ADEQUATE EXHAUST OPENINGS WILL CAUSE A BUILD UP OF HUMIDITY INSIDE THAT WILL BECOME VERY UNCOMFORTABLE.**

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.

There are three main ways that an evaporative cooler can operate to provide cooling comfort.

- The cooler can be set to cool at a constant fan speed, without reference to the current temperature.
- The cooler can be given a temperature target, in which case it will vary the fan speed in order to get as close to the target as possible. (**Note!** Dependant on controller installed.
  **Note!** Humid weather conditions may limit the temperatures that can be achieved).
- The cooler can be set to a fan only mode, providing air circulation only.

## START UP

- Turn on the water supply and make sure the shut off valve at the cooler is also on.
- Turn on electrical power supply.
- Wait a few minutes for the water to fill the cooler tank.
- Turn on "cooling" at the wall control to start the pump and pre-wet the pads.
- Turn on the fan to High or Low speed as desired.
- In humid weather you may feel more comfortable by turning off the cooling to run the fan only.
- You can create your own pattern of air flow in the building by adjusting the outlet vents and doors and windows to direct the air where you want it.

# 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. For this reason they are included in the Maintenance Schedule.

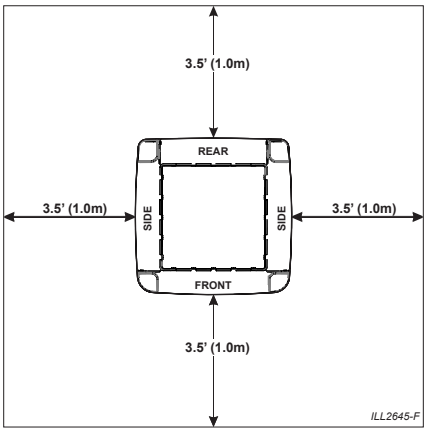
## HEALTH REGULATIONS

In some regions, regulations require that evaporative air coolers be serviced at specific intervals. Ensure all maintenance is done in accordance with any local and national regulations (e.g. AS/NZ 3666.2:2011).

## 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°
- 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 inspected after the first year of use, and serviced every 2 years for residential purpose.

| COMPONENT CHECKS | | Service Year | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **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 | Service Year | | | | | | |
|---|---|---|---|---|---|---|---|
| **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** | **Service Year** | | | | | | |
| **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) | | | | | | | |

## 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** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 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 | | | | | | | |

# MAINTENANCE

## RESIDENTIAL SERVICE RECORD

| Service No. | Service Date | Service Technician | Service Company |
|---|---|---|---|
| No.1 | ..... | ..... | ..... |
| No.1B | ..... | ..... | ..... |
| No.2 | ..... | ..... | ..... |
| No.2B | ..... | ..... | ..... |
| No.3 | ..... | ..... | ..... |
| No.3B | ..... | ..... | ..... |
| No.4 | ..... | ..... | ..... |
| No.4B | ..... | ..... | ..... |
| No.5 | ..... | ..... | ..... |
| No.5B | ..... | ..... | ..... |
| No.6 | ..... | ..... | ..... |
| No.6B | ..... | ..... | ..... |
| No.7 | ..... | ..... | ..... |
| No.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 inspected after the first 3 months of use, then 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** | | | | **3** | | | |
| **Service Item** | **Action** | **A** | **B** | **C** | **D** | **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** | | | | **3** | | | |
| **Service Item** | **Action** | **A** | **B** | **C** | **D** | **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** | | | | **3** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Action** | **A** | **B** | **C** | **D** | **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** | | | | **3** | | | |
| **Action** | **A** | **B** | **C** | **D** | **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** | **1** | **2** | **3** |
| 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 |
|---|---|---|---|
| No.1 | ..... | ..... | ..... |
| No.1A | ..... | ..... | ..... |
| No.1B | ..... | ..... | ..... |
| No.1C | ..... | ..... | ..... |
| No.1D | ..... | ..... | ..... |
| No.2 | ..... | ..... | ..... |
| No.2A | ..... | ..... | ..... |
| No.2B | ..... | ..... | ..... |
| No.2C | ..... | ..... | ..... |
| No.2D | ..... | ..... | ..... |
| No.3 | ..... | ..... | ..... |
| No.3A | ..... | ..... | ..... |
| No.3B | ..... | ..... | ..... |
| No.3C | ..... | ..... | ..... |
| No.3D | ..... | ..... | ..... |

# COMMISSIONING

## SETTING THE WATER LEVEL

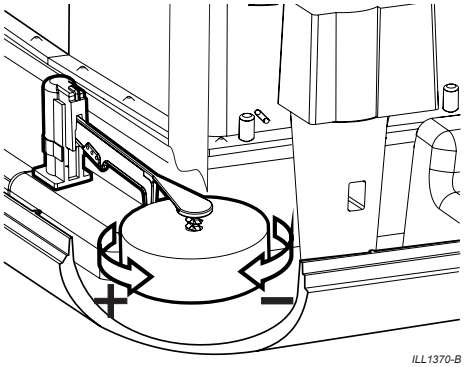
Turn on the mains water supply to the cooler.

Turn the cooler on at the controller, in “COOL” mode.

Adjust the fan speed buttons so that fan speed remains low.

Allow the tank (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 tank (reservoir) and allow it to refill to the new set point. If too low rotate the float in an anti-clockwise direction.

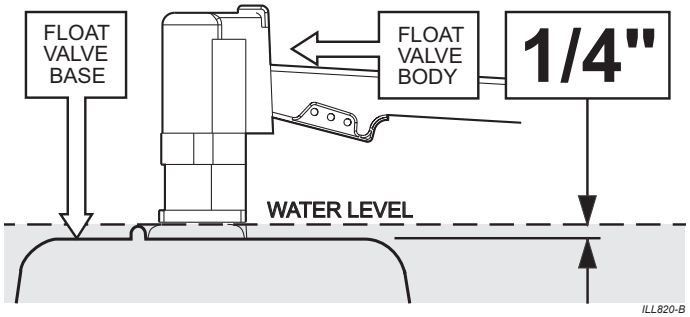



ILL1370-B

For EXT models the correct water level is approximately 1/4” (5mm) above the surface of the tank (reservoir) that 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 correct, isolate the control box and connect the pump plug.

### MODEL EXT




ILL820-B

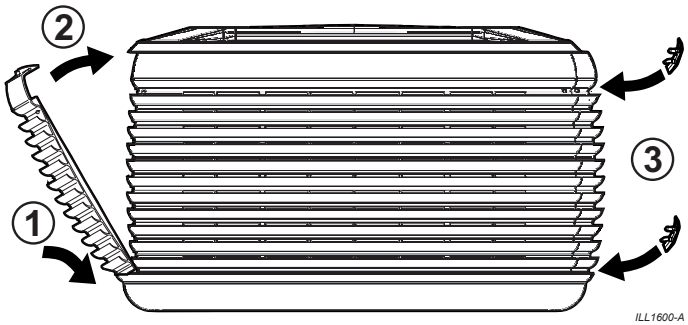
## TESTING THE PUMP

Test the pump by turning the cooler on at the MagIQtouch controller, in “COOL” mode. Check that water is evenly distributed to all pads.
**Note!** If the cooler has not been on before it will run a “Pre-Wet” routine where the pump will operate to saturate the pads.
This cycle takes 2 minutes, then the fan will start automatically.

## REFITTING THE PAD FRAMES

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

Refit the corner clips after replacing the pad frame(s).




ILL1600-A

# COMMISSIONING THE COOLER

## COMMISSIONING COMPLETION CHECKLIST

### COOLER

□ SECURE - The cooler is secure and level on the dropper using all fixings supplied.

□ SEALED - The dropper and all penetrations are correctly flashed and sealed.

### WEATHERSEAL

□ OPERATES - The Weatherseal operates correctly and can open and close without interference.

### 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 / DRAIN

□ INSTALLED - The bleed tray 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 tank 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
- □ Control cable
- □ Pump cable

□ OWNER INSTRUCTIONS - The owner has been instructed how they can electrically isolate the unit at the meter box in case of an emergency.

### DUCTWORK

□ NO LEAKS - All ducts are hung correctly and there are no air leaks.

□ CONTROLLER SEALED - All wall holes behind the controller have been sealed.

□ QUIET - Check that the cooler runs quietly and with an even distribution of air to all outlets.

□ AIRBALANCE – 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 tank. Operate in COOL mode, lowest speed for 5 minutes, then drain the tank. 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. Your aim should be to have the customer not even be aware that you have been on site.

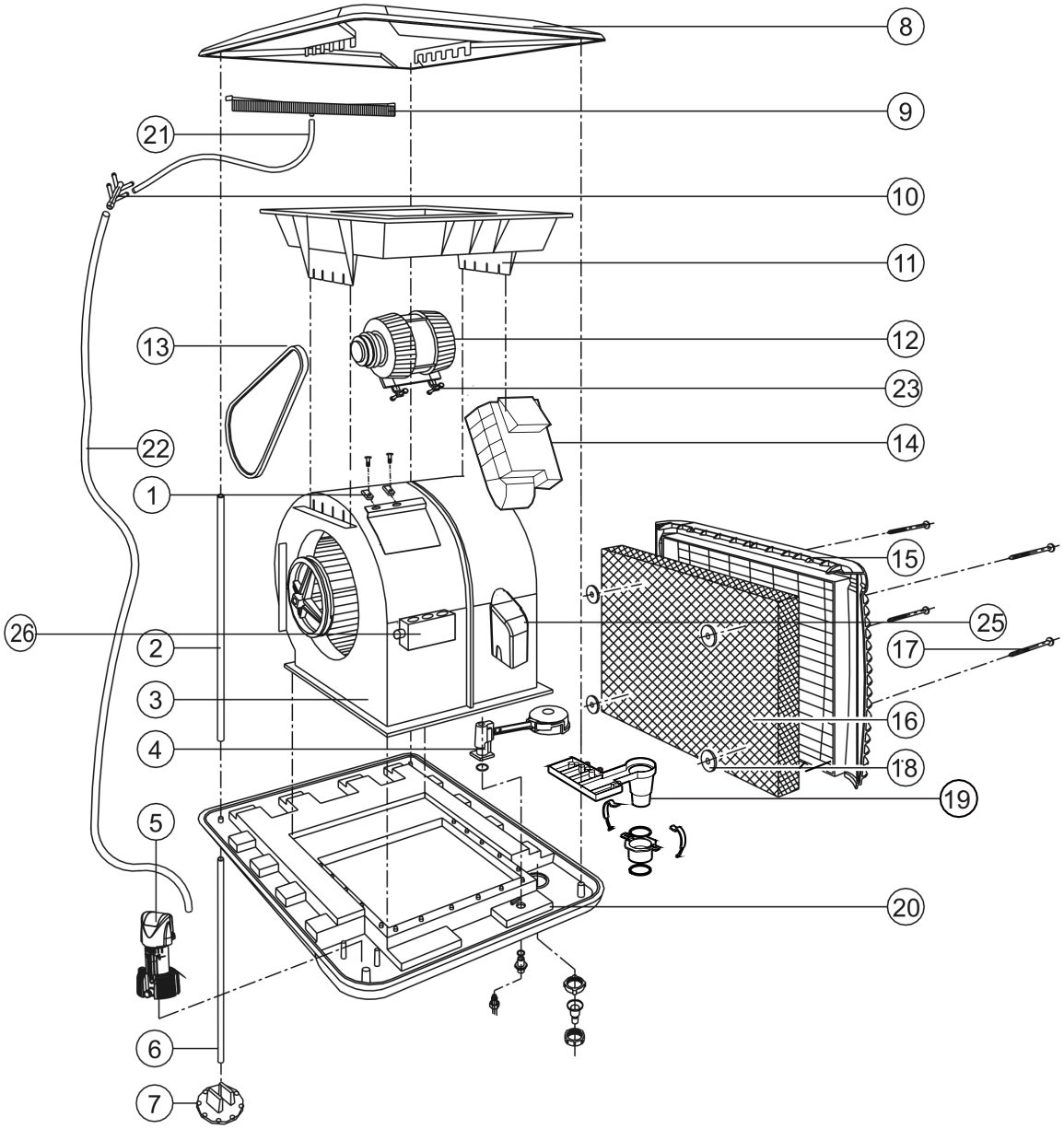
### FINAL CHECK

□ 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 ducts. | 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. |
| | Dry patches in pads (LPQI Models only) | Check for blockages inside the lid water distribution channels by lifting up the rubber channel cover. Clear out any debris.<br>Ensure the rubber channel cover is refitted and pressed down flush all the way around the lid before refitting pad frames or running the 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 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 except to shut off the pump. |
| **Noisy cooler** | Fan out of balance due to dirt, etc. | Clean the fan. |
| | Too much back pressure.<br>Tight duct bends.<br>Grilles too small. | Re-evaluate design; improve duct layout; change grille sizes. |
| **Pump fails to operate.** | Circuit breaker tripped. | Check pump for faults. Replace if necessary. |
| | Pump motor failure. | Replace pump. |
| **Fan fails to start.** | Main power circuit breaker tripped. | Check cause of overload. Reset circuit breaker. |
| | Fan motor burned out. | Replace motor. |
| | Low system voltage. | Consult with power supply authority. |
| | Check fault condition via the tri-colour LED on cooler electronics module. | Rectify fault as indicated and restart the cooler. |
| | Controller failure. | Replace controller. |
| **Pump runs but no water circulation or Pump runs but pads lack water** | Insufficient water in tank. | Adjust float level. |
| | Water hoses blocked. | Check and clean out blockage. |
| | Pump strainer blocked. | Clean pump strainer. |
| | Insufficient water supply pressure. | Check and confirm water supply pressure |
| | Water solenoid is installed incorrectly. | Check installed in the correct water flow direction |
| **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 tank, run pump for a short period to wash pads, drain tank, 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 tank water. | Drain tank (reservoir), clean thoroughly with strong cleansing agent, refill, change pads. |
| | Pads remain wet after shut down. | Run fan on "vent" for 10 minutes after cooling cycle to dry pads out. |
| | Heavy pad deposits. | Clean or replace pads. |

## EXPLODED VIEW




| ITEM | DESCRIPTION | QTY | | ITEM | DESCRIPTION | QTY |
|---|---|---|---|---|---|---|
| 1 | J-NUTS & SPEED NUTS | 2 | | 13 | V-BELT | 1 |
| 2 | POST, CORNER | 4 | | 14 | JUNCTION BOX | 1 |
| 3 | SCROLL (Blower Housing) | 1 | | 15 | PAD FRAME | 4 |
| 4 | FLOAT VALVE | 1 | | 16 | CHILLCEL COOLING PAD | 4 |
| 5 | PUMP - Water Circulation | 1 | | 17 | PAD RETAINING PIN | 8 or 16 |
| 6 | SUPPORT - Leg Extension | 4 | | 18 | PAD RETAINING WASHER | 8 or 16 |
| 7 | SUPPORT - Leg Foot | 4 | | 19 | BLEED FUNNEL ASSEMBLY | 1 |
| 8 | LID | 1 | | 20 | PAN (Tank) | 1 |
| 9 | SPREADER - Water Distribution | 4 | | 21 | HOSE 1/2” ID, PVC - Water Distribution | |
| 10 | 4-WAY DISTRIBUTOR (Water) | 1 | | 22 | HOSE 3/4” ID, PVC - Water Distribution | |
| 11 | BRIDGE | 1 | | 23 | BELT ADJUSTING ASSEMBLY | 1 |
| 12 | PULLEY, MOTOR - Adjustable | 1 | | | | |

## 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*

**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.