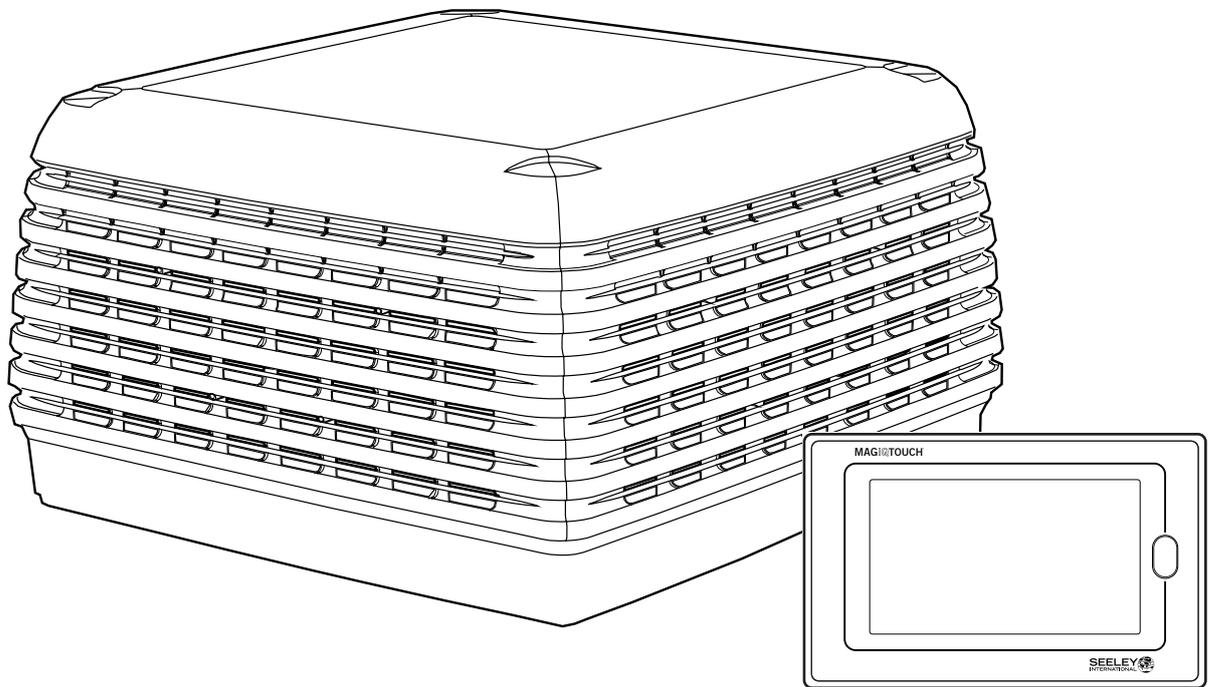




# INSTALLATION MANUAL

## TBQI Evaporative Cooler



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19

**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 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.

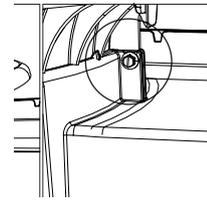


Page 4

### Step 3

#### REMOVE VENTURI

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

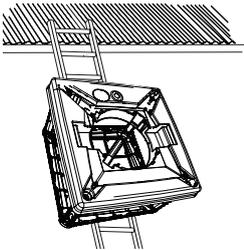


Page 4

### Step 7

#### CONVEY COOLER TO ROOF

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

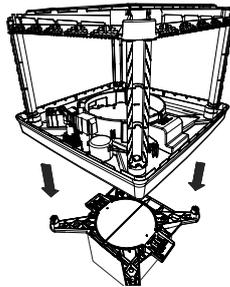


Page 8

### Step 8

#### MOUNT THE COOLER

Lower the cooler onto the transition.

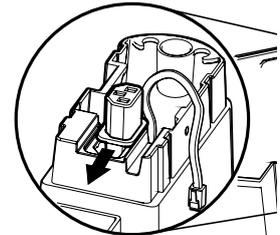


Page 8

### Step 9

#### CABLE INSTALLATION

Run the power and control cable down the roof jack and out through the grommet.

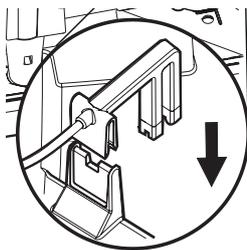


Page 9

### Step 13

#### INSTALL WATER SENSOR

Ensure the clip is fully engaged.



Page 11

### Step 14

#### INSTALL DRAIN VALVE

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

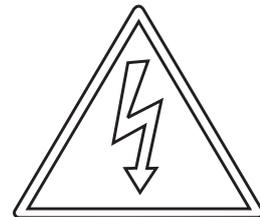


Page 11

### Step 15

#### LOCAL REGULATIONS

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



Page 12

### Step 19

#### COMMISSIONING THE COOLER

Switch the mains power on and test run the cooler.

Page 15

### Step 20

#### FINAL CHECK

Complete the commissioning checklist at the end of this document.



Page 17

### Step 21

#### CLEAN UP

Clean up the site!



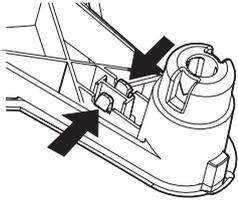
Page 17

## QUICK GUIDE cont.

### Step 4

#### REMOVE TRANSITION

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

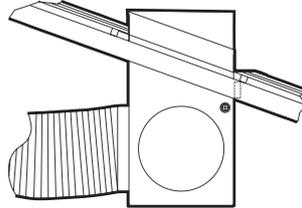


Page 5

### Step 5

#### MOUNT ROOF JACK

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

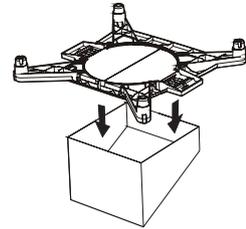


Page 5

### Step 6

#### SECURE ROOF JACK, DUCT ADAPTOR & TRANSITION

Use the TEK screws provided.

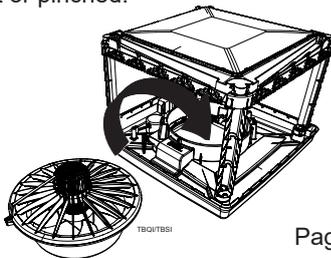


Page 8

### Step 10

#### INSTALL VENTURI / FAN

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

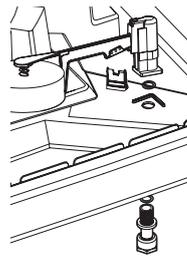


Page 9

### Step 11

#### INSTALL FLOAT VALVE

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

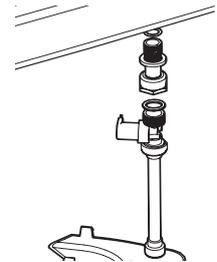


Page 10

### Step 12

#### INSTALL INLET SOLENOID

Use the supplied hose set and fittings. Note the water flow direction marking on the solenoid.

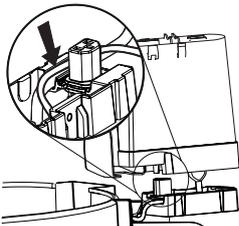


Page 10

### Step 16

#### ELECTRICAL CONNECTIONS

Connect the cooler components to the electronics module. Plug the mains cable into the electronics module.



Page 12

### Step 17

#### MOUNT AND CONNECT THE CONTROLLER

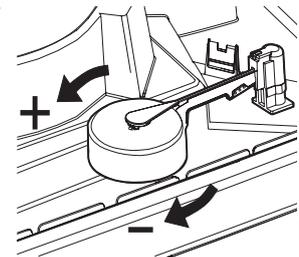


Page 14

### Step 18

#### SET THE WATER LEVEL

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



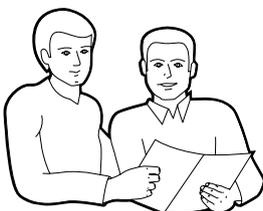
Page 15

### Step 22

#### CUSTOMER HANDOVER

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

Explain maintenance requirements.



Page 17

## INSTALLATION INSTRUCTIONS

### COOLER LOCATION

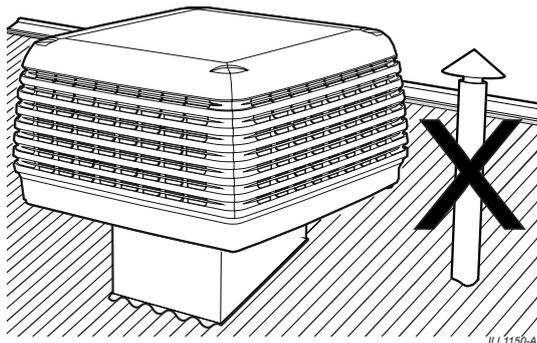
Check proposed cooler location to ensure it is structurally capable of supporting the weight of the cooler. If the roof is structurally inadequate, provide an alternate load bearing structure.

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 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:

- 3m (10') from a solid fuel heater flue,
- 1.5m (5') from a gas flue,
- 1.0m (3.5') away from adjacent solar panels or similar roof mounted fixtures,
- 5m (17') from a sewer vent, and
- 600mm (2') from a wall.



- The cooler must be mounted at least 3m (10') (preferably 5m (17')) 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?

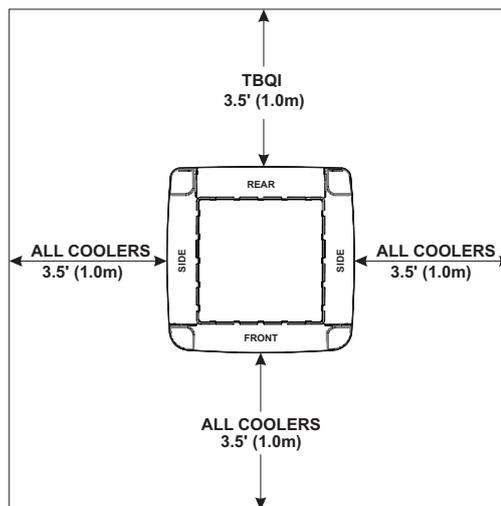
### ACCESS FOR SERVICING AND MAINTENANCE

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 (> 3m or 10' 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.



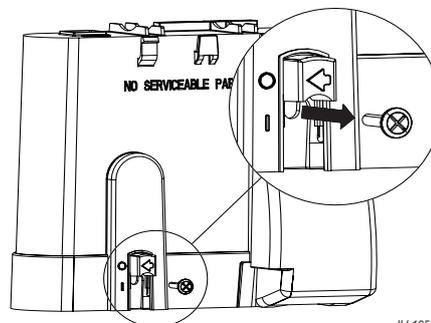
ILL2645-C

**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.

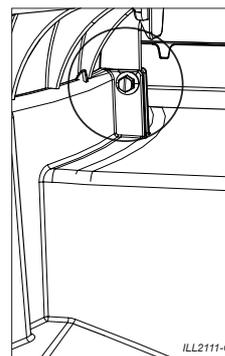
Disconnect the electronics module from the pan (reservoir) by removing the screw under the switch. The isolation switch cannot be activated with this screw removed. Remove the pump and motor cables from the plugs in the electronics module.



ILL1053-C

**Note!** Place the electronics module and the screw safely to one side for later use. Do not re-fit the electronics module, as the motor plug will require connection to the underside of the module when the venturi is refitted into the cooler.

For TBQI coolers, remove the 2 screws securing the venturi to the pan (reservoir).



ILL2111-C

**TBQI COOLERS**

## INSTALLATION INSTRUCTIONS

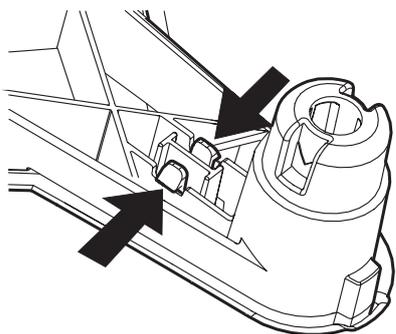
Lift the venturi and fan assembly out of the cooler, taking care of the motor lead(s).

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

### REMOVING THE TRANSITION

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.

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.



ILL1155-C

### PREPARING THE ROOF JACK

The 550 x 550mm (21 5/8 x 21 5/8") roof jack duct must have a raw edge or safe edge at the top. Use 24G or stronger metal roof jack.

### MOUNTING THE ROOF JACK

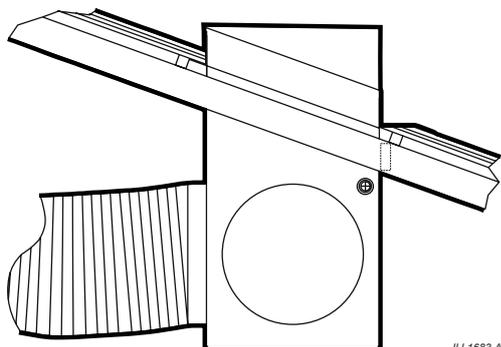
Install the roof jack and securely fix it to the roof structure on 3 sides. This may require the addition of extra structural timber.

**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 200mm (8") higher than the roof timbers, or design wind velocity at the site exceeds 43m/s (141fps).

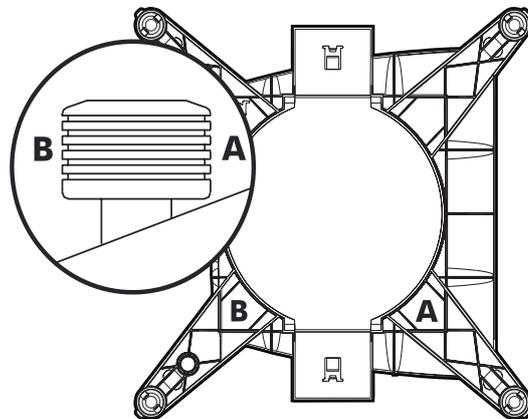
In exposed or very high wind areas use 16 screws, minimum shank diameter 5.2mm (7/32") to secure the roof jack. In areas subject to hurricanes/windstorms or where the cooler is located more than 8m (26') above the ground seek advice from a structural engineer.



ILL1683-A

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

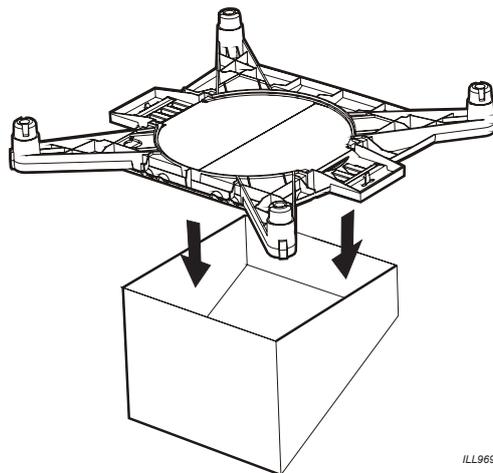
Ensure that it is orientated correctly, as shown by the engraved detail on the transition.



ILL969-B

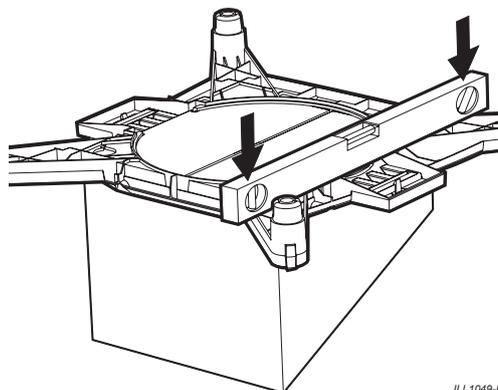
### SECURING THE ROOF JACK AND TRANSITION

Fit the transition onto the roof jack as shown.



ILL969-B

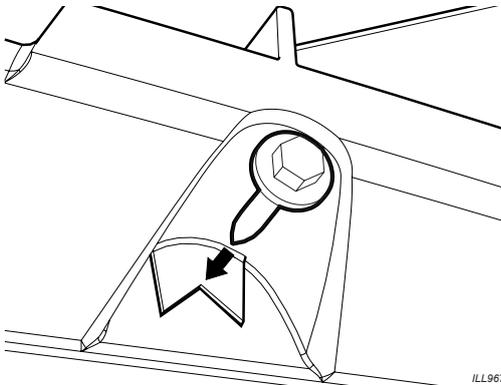
Check the level of the transition on the roof jack, with a spirit level placed across the flats in both directions.



ILL1049-B

## INSTALLATION INSTRUCTIONS

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



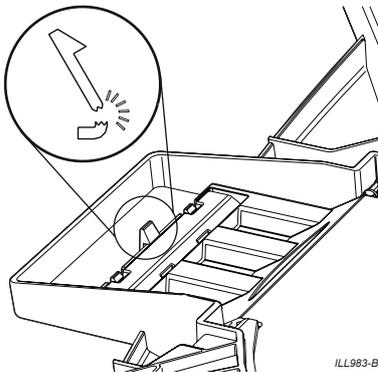
Only use the screws provided. These must be used in the correct positions to prevent interference with the AutoWinterseal. All eight (8) screws must be used. Check the level periodically before driving in all the screws.

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

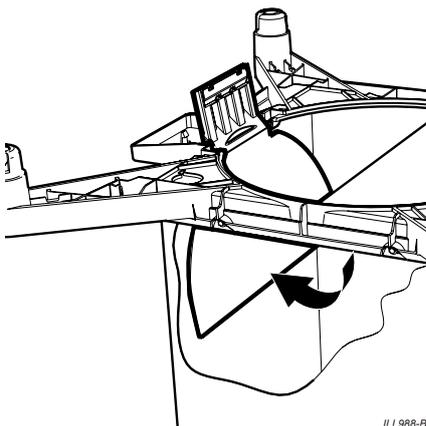
### OPTIONAL WEATHERSEAL

**NOTE:** Optional Weatherseals can only be used on new installations with a 21 $\frac{5}{8}$ " \* 21 $\frac{5}{8}$ " roof jack.

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.

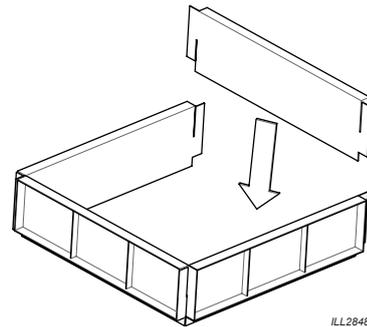


## EXISTING/REPLACEMENT INSTALLATIONS

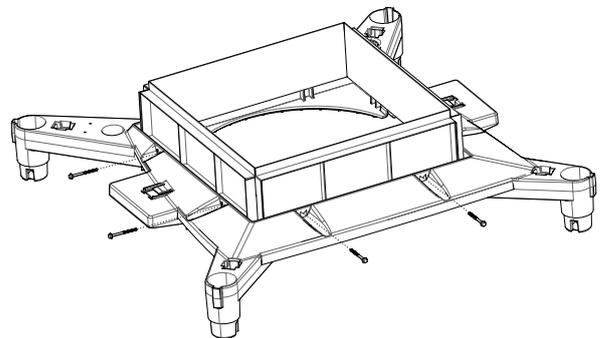
The TBQI is designed for a roof jack which is 21  $\frac{5}{8}$ " x 21  $\frac{5}{8}$ " (550mm x 550mm) and made from 24G steel which will be able to support the entire weight of the unit. On existing/replacement installations ensure a suitable roof jack is used.

**Note:** On smaller roof jack, duct adaptors may be used. The TBQI5500 comes with 17  $\frac{3}{4}$ " x 17  $\frac{3}{4}$ " (450 x 450mm) adaptors and the TBQI7500 comes with 19  $\frac{3}{4}$ " x 19  $\frac{3}{4}$ " (500 x 500mm)

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

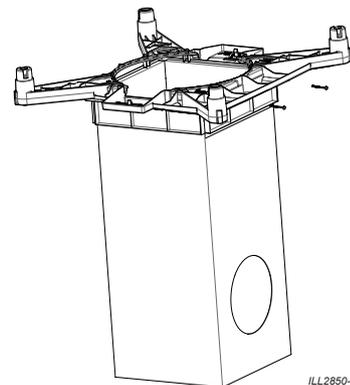


Place the adaptor in the transition and screw in place using the screws provided. Ensure the screws go through both the transition at the eight "V" notch locations and adaptor.



### TRANSITION SHOWN UPSIDE DOWN

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

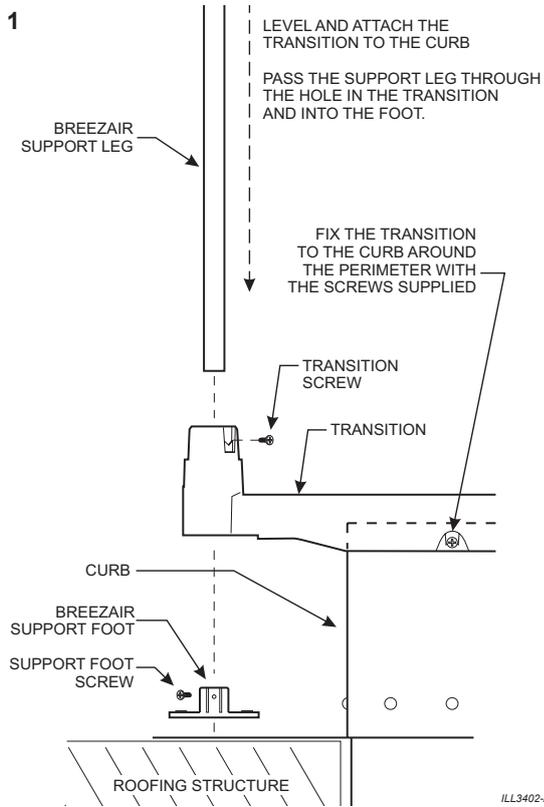


**Note:** In locations in high winds or where leg supports are required, Seeley International provides a kit. Contact your nearest Seeley supplier for more details.

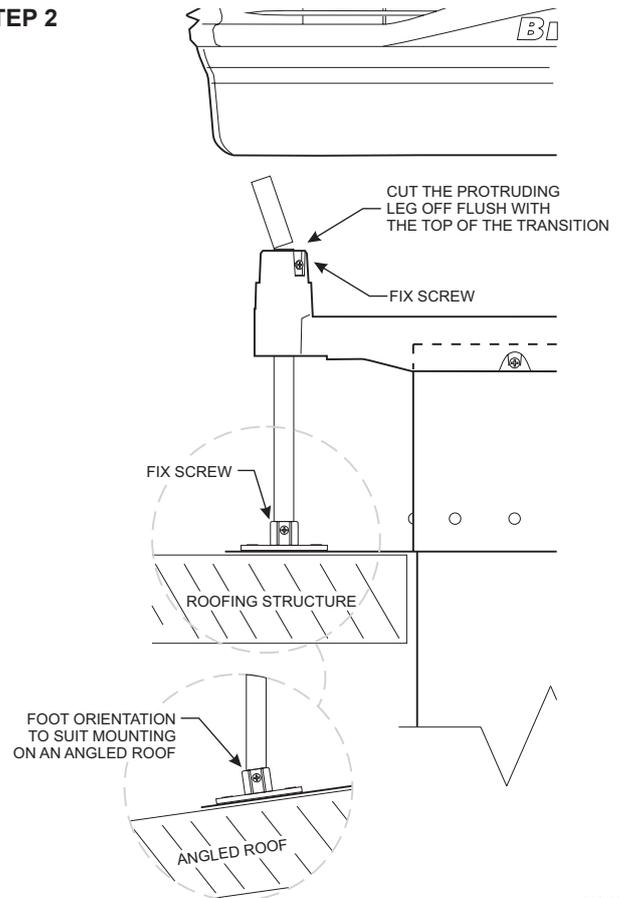
# INSTALLATION INSTRUCTIONS

## FITTING THE OPTIONAL LEG SUPPORT KIT

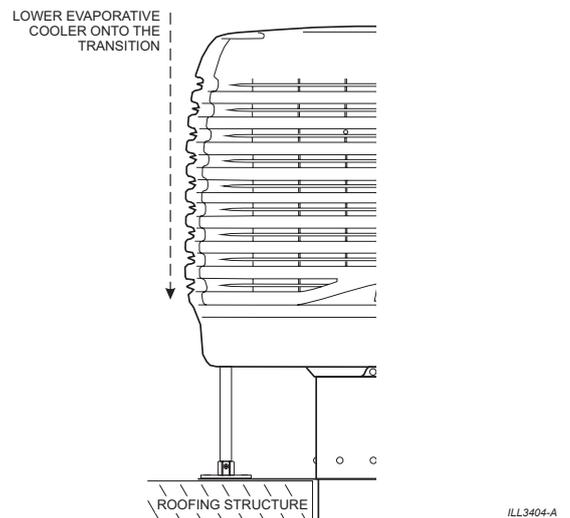
### STEP 1



### STEP 2



### STEP 3



### ENGINEERS AND INSTALLERS PLEASE NOTE:

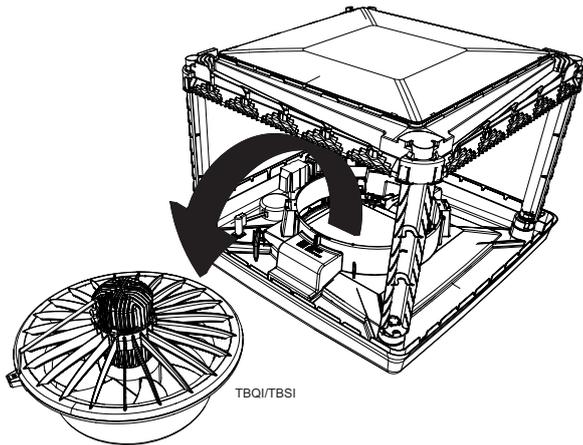
The cooler must rely on the curb and duct for its major attachment to the building. The legs shown on this diagram have no performance ratings for down-load or wind-load.

# INSTALLATION INSTRUCTIONS

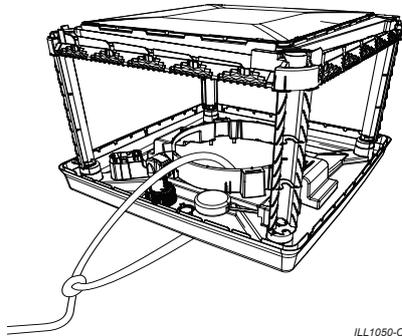
## CONVEYING THE COOLER TO THE ROOF

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

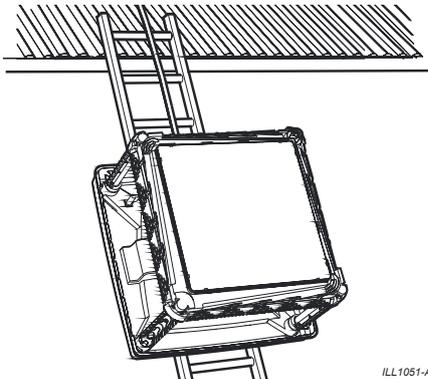
It is recommended that at least 2 people move the cooler into position and that the transition, pad frames, venturi assembly and any unsecured objects are removed beforehand.



Carefully convey the cooler to the roof, avoiding scratching the unit and observing any WHS 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.

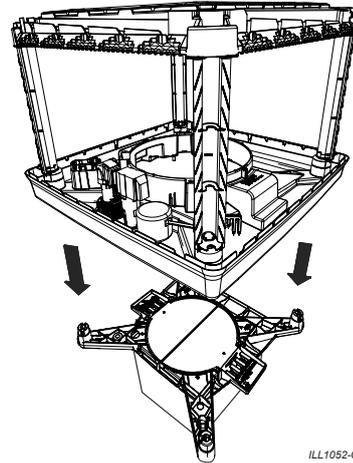


If you intend to pull the cooler onto the roof using a ladder as a slide, then guide the cooler on the underside of the pan (reservoir).



## 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.



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.

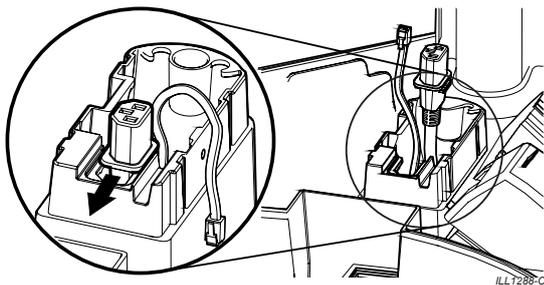
# INSTALLATION INSTRUCTIONS

## CABLE INSTALLATION

Pass the taped end of the wall control cable through the conduit adaptor (factory fitted in the transition) and leave about 0.5m (20") in the water pan (reservoir).

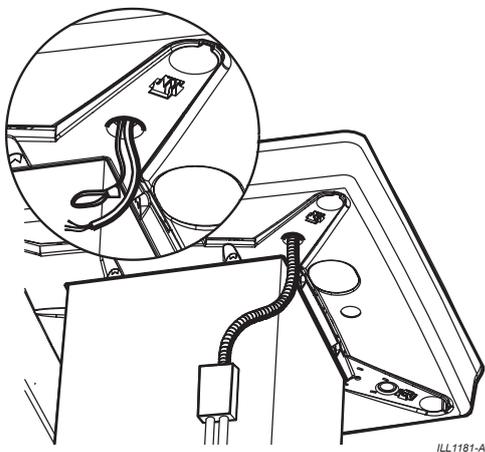
Take the power cable and drop the non-plug end down the hole where the electronics module was and pass it through the conduit adaptor. **Important!** Pass the wall control cable through the conduit first.

Lock the power cable socket in place by sliding the plug in sideways into the pan (reservoir) as shown. Now pass the cables through your main conduit and connect the main conduit to the conduit adaptor (under the transition).



Terminate the power cable in a junction box installed nearby. The fixed wiring must be fitted with an isolation switch that breaks the active (hot) and neutral (common) in accordance with local wiring rules. We recommend the junction box be located and installed on the duct.

**Note!** The maximum length for the wall control cable to travel alongside the power cable is 10m (33').



The plug will only insert one way, with the chamfered end first. For now, leave the control cable end in the pan (reservoir) as it will be connected later.

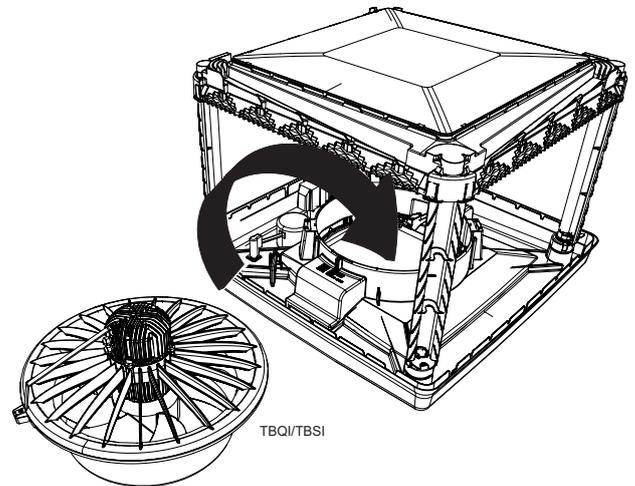
**WARNING!** Do not let cables, cable ends, or the control box get wet. Position the cables so they will be accessible from inside the roof space.

Place excess length of the cables in the roof cavity and not inside the cooler. Do not coil the power cable.

Push the cables into the cable slot in the transition as shown (control cable first) and then seal the hole with the plug provided.

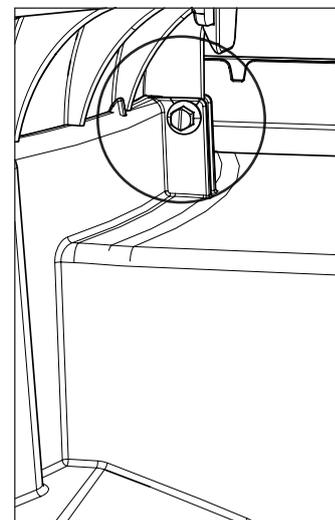
## INSTALLING THE VENTURI / FAN ASSEMBLY

For TBQI coolers, ensure the venturi is sitting flat in the pan (reservoir)



**Important!** Ensure the plug/lead assembly is not caught under the bottom lip of the venturi during installation by holding it out of the way.

Carefully lift the venturi/fan assembly into position inside the pan (reservoir). Rotate the venturi until the ribs (2) on the venturi are in the locating ribs (2) in the pan (reservoir). The venturi securing screws (2) do not need to be re-fitted.



## 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:**

<b>Water Connection</b>	1/2" BSP
<b>Min Water Pressure</b>	100kPa (15psi)
<b>Max Water Pressure</b>	800kPa (115psi)
<b>Min Water Flow</b>	8 liters/min (2.1 gallons/min)
<b>Max Water Temperature</b>	40°C (104°F)

**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 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.

The water connection is a 1/2" BSP compression fitting or a 1/2" BSP to 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.

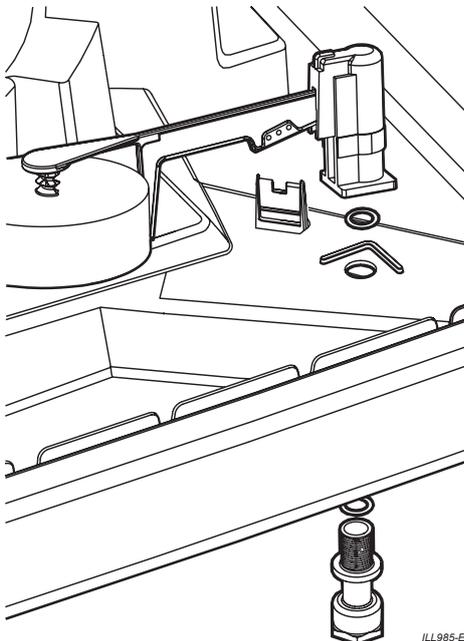
**Important!** Flush the water pipe to remove any swarf before final fitting. Swarf can lodge in the solenoid and float valve, preventing them from functioning correctly.

## 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.



ILL985-E

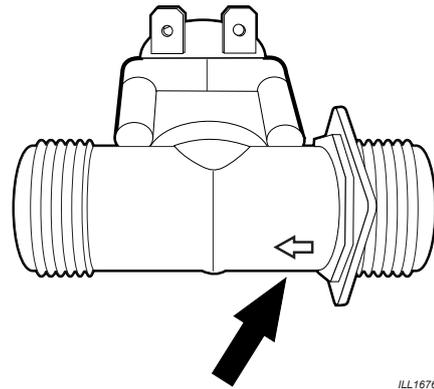
## INSTALLING THE INLET SOLENOID

For coolers fitted with a drain and solenoid valve, it is a requirement to fit the new detachable hose set supplied. Any old hose sets should not be re-used.

Screw the solenoid valve into the extension tube.

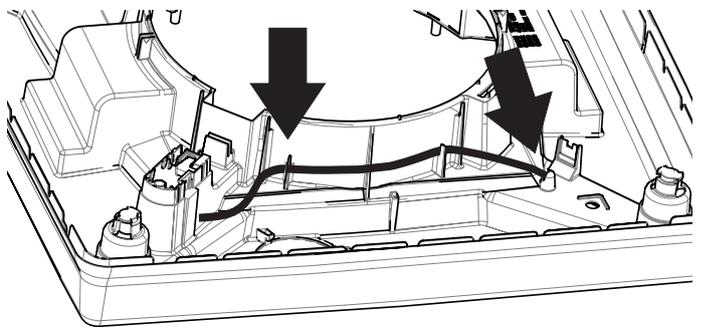
**Note!** Tighten the solenoid valve until it seals against the rubber washer and is in the orientation shown such that the solenoid cover will clip on over the top.

The water solenoid is required to be installed in the direction of flow as per the arrow indicator on the solenoid.

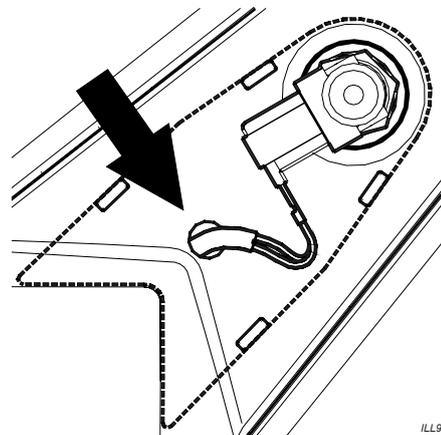


ILL1676-A

Connect the supplied cable to the solenoid valve, then push the other end through the hole in the transition as shown. Pull the cable through from inside the cooler and route the cable as shown. This will be connected later.



ILL414-C



ILL993-B

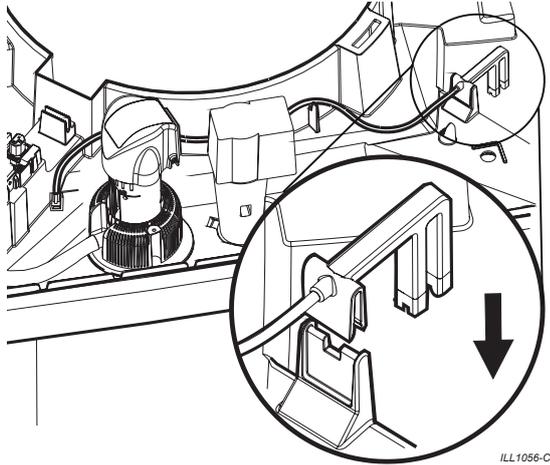
Clip the solenoid cover in place and connect the flexible hose to the mains water supply.

## WATER REQUIREMENTS

### INSTALLING THE WATER SENSOR

Assemble the water sensor as shown by clipping the sensor to the pan (reservoir). Ensure that the clip fully engages.

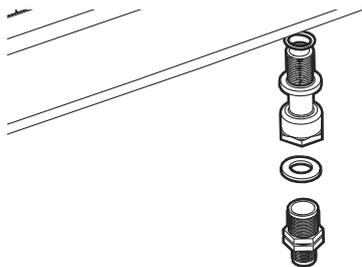
Route the sensor cable through the cable supports in the pan (reservoir) as shown and leave the end clear of any water. The cable will be plugged in later.



### MAINS WATER CONNECTION

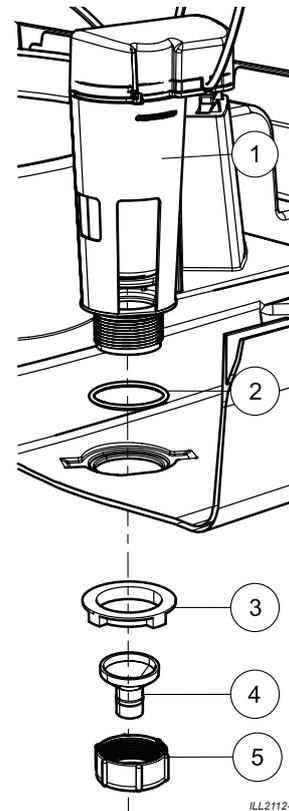
Connect the main water supply to the water inlet point under the air cooler using the 1/2" BSP Nut and olive fitting or 1/2" BSP - 1/4" brass compression adaptor fitting as required.

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



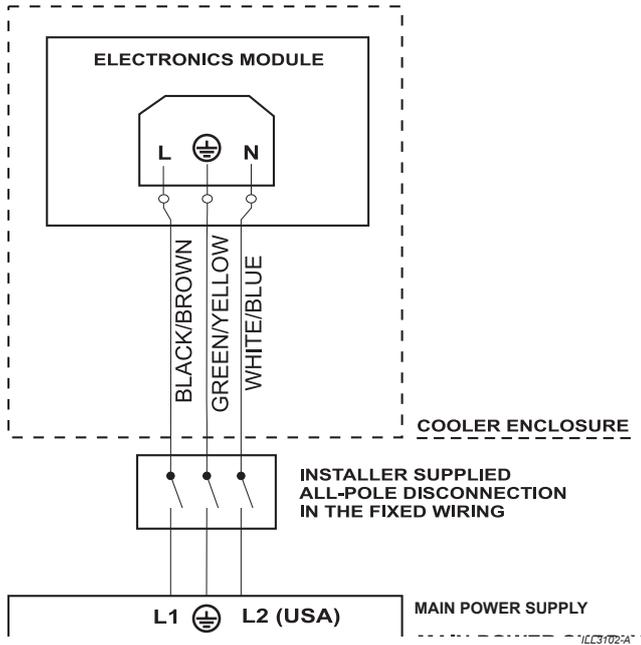
### INSTALLING THE DRAIN VALVE

Water drained from the cooler must be carried away to a suitable discharge point in accordance with local regulations. Important! Never drain water from the cooler directly on to the roof. Assemble the drain valve (1) as shown:



Make sure the "O"-ring (2) is fitted before placing the drain valve into the hole. Screw the nut (3) up tightly by hand underneath to locate the drain valve. Locate the funnel (4) up against the bottom of the drain valve thread and secure with the second, larger nut (5). Make sure that you use the correct drain adaptor. Make sure the drain water discharge flows freely away from the cooler. **Important!** Do not over-tighten plastic fittings.

# 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 means to ensure all-pole disconnection from the supply mains, in accordance with local and national wiring rules.

The following specifications for the cooler electrical supply are required:1

TBQI5500 & TBQI7500: 115V / 60Hz

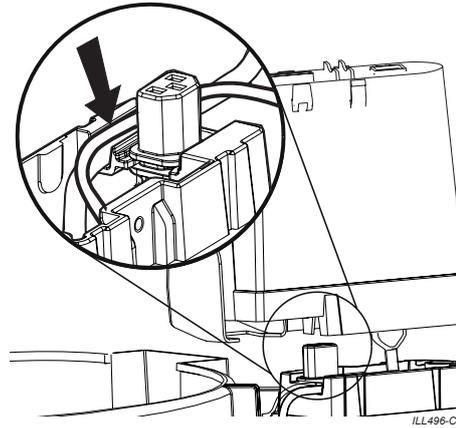
The electronics module is fitted with a 10A anti-surge fuse.

**WARNING!** 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.

## ELECTRICAL CONNECTION

Connect the motor cable to the base of the electronics module. It is a polarised plug and will only insert one way. Ensure it is secured fully so that its retention clips are engaged.

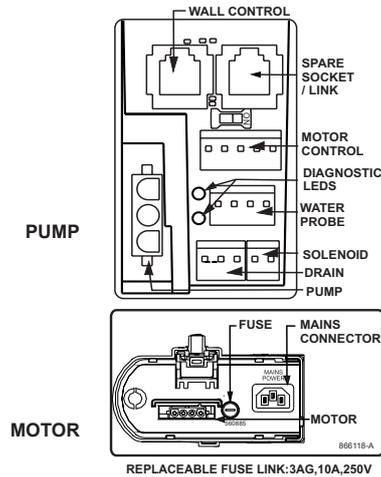
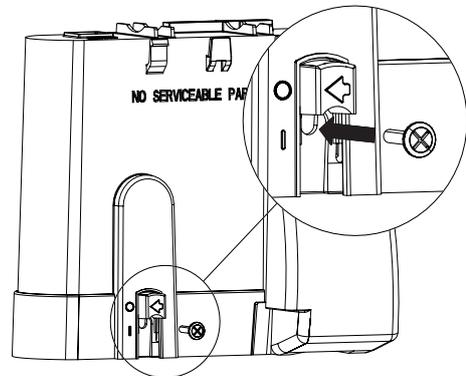
Route the end of the wall control cable out of the cavity via the same channel as the motor cable. Ensure you have about 200mm (8") of wall control cable outside the cavity.



With both cables in place (inside the channel), re-assemble the electronics module and screw it to the pan (reservoir).

**Important!** The isolation switch cannot be activated unless this screw is fixed in place.

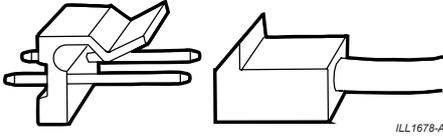
Switch OFF the electronics module before connecting any accessories.



**Note!** Fit either the shorting plug or water sensor as required.

## ELECTRICAL REQUIREMENTS

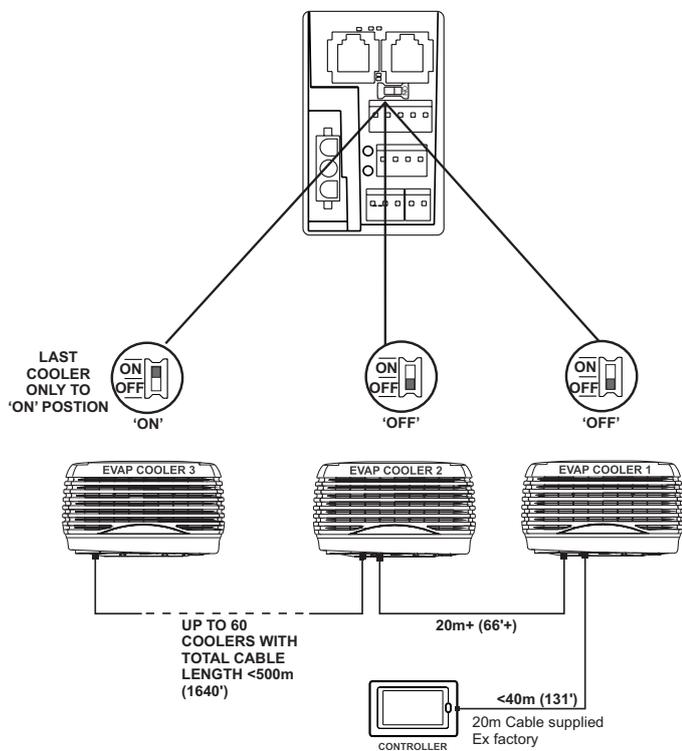
Ensure the cables cannot rest in the water once the pan (reservoir) is filled and plugs are connected in the correct orientation.



### MULTIPLE COOLER INSTALLATIONS

Cooler electronics fitted with 2X RJ connector can be installed as follows;

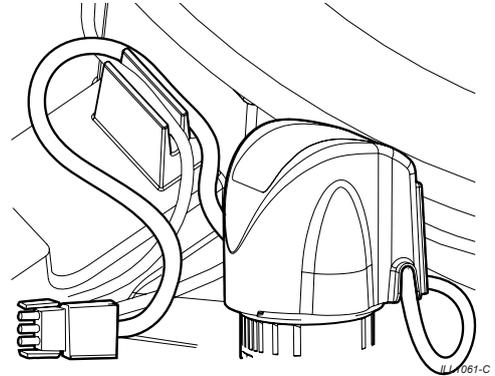
Ensure all cooler electronics dipswitches are set to 'OFF' except for the last cooler in series. The last cooler dipswitch should be switched to 'ON' to ensure communication reliability.



ILL2330-E

## CONNECTING THE WATER PUMP

Route the pump cord as shown.

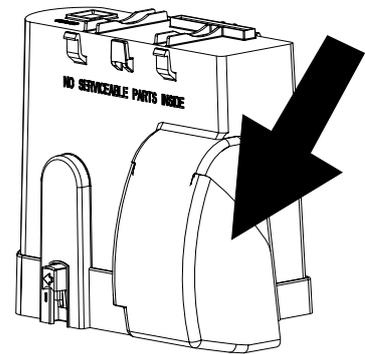


Once the water level is set correctly, isolate the electronics module and connect the pump plug.

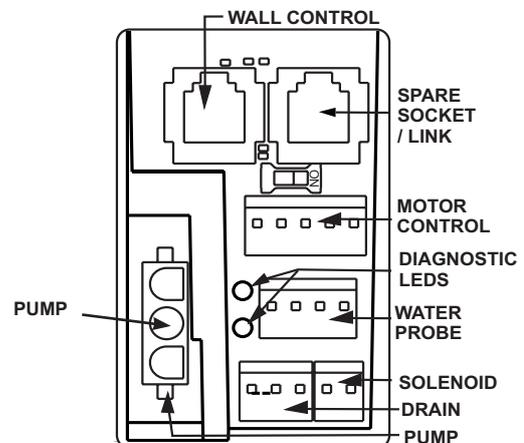
**Important!** Do not connect the pump plug until the water level is set.

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

Once plugs are connected, switch the electronics module on. **Important!** Ensure the flexible splash protection cover is in place.



ILL1095-C



ILL2119-B

**Note!** Fit either the shorting plug or water sensor as required.

## ELECTRICAL REQUIREMENTS

### CONNECTING THE MAGIQTOUCH CONTROLLER

Refer to the installation manual provided with the MagIQtouch Controller for instructions on installing the controller. The wall control cable plugs into the electronics module - (A) (refer diagram adjacent). Coolers are supplied with a 20m (66') control cable. Longer cable lengths are available from Seeley.

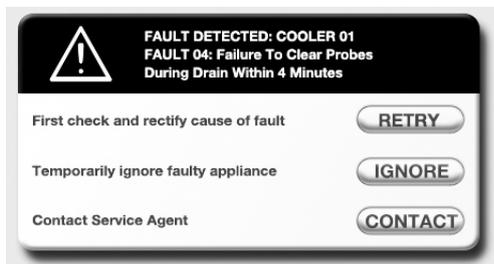
**Important!** The maximum cable length allowed from the MagIQtouch Controller to the first cooler is 20 metres (66'). For any additional coolers added into the system with a link module the maximum allowed length is 40 metres (131'). Therefore, failure of the product or components to operate correctly due to modification to supplied cables, or the use of non-approved cables will NOT be accepted under the Manufacturer's Warranty.

We have this cable available through our Sales order office and spare parts outlets in the following lengths:

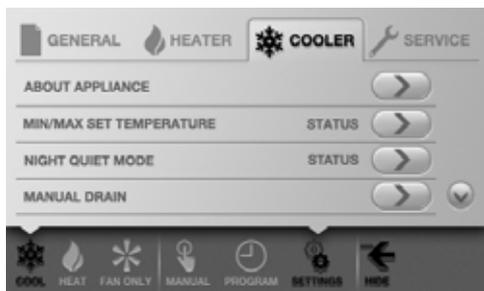
Part No.	Length	Details
833880	20m	MagIQtouch Controller Cable (No Ferrite)
862873	1.5m	MagIQtouch Controller Cable (No Ferrite)
861265	3m	MagIQtouch Controller Cable (No Ferrite)
864396	30m	MagIQtouch Controller Cable (With Ferrite)
864402	40m	MagIQtouch Controller Cable (With Ferrite)

### MAGIQTOUCH CONTROLLER DISPLAY INFORMATION

Diagnosis and cooler operating information can also be viewed from the MagIQtouch Controller. Faults are displayed on the screen as they occur.



Cooler operating information is available from the 'Service Operating Screen' under the COOLER tab of the SETTINGS menu.



# COMMISSIONING THE COOLER

## SETTING THE WATER LEVEL

Isolate power to the cooler electronics and disconnect the pump, making sure the plug is kept away from any water. Turn the power back on.



ILL1663-A

Turn on the mains water supply to the cooler.

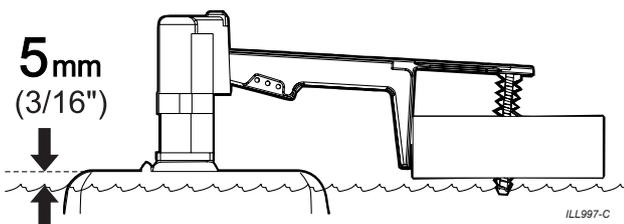
Turn the cooler on at the controller, in "COOL" mode.

Adjust set temperature slider / fan speed buttons to be close to current room temperature so that fan speed remains low.



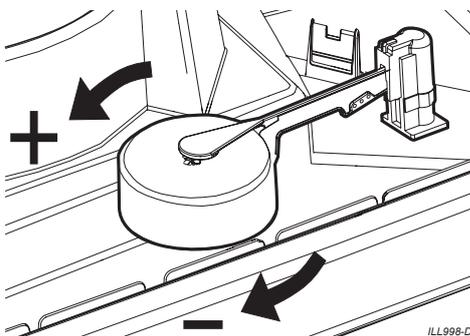
ILL1615-A

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.



ILL997-C

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 an anti-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".

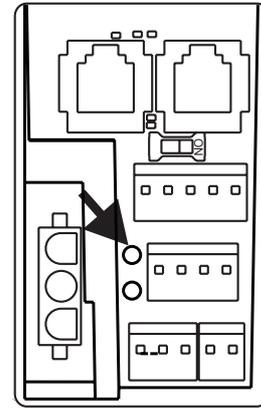


ILL998-D

## TEST OPERATION

Check that the green light on the electronics module is on and double flashing every 2 seconds. This indicates that power is connected to the electronics module.

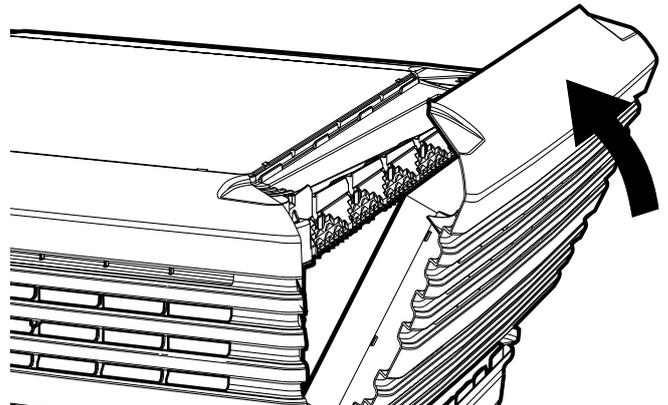
**Important!** Ensure the flexible splash protection cover is put back in place.



ILL2120-B

## 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.



ILL976-D

## COMMISSIONING THE COOLER

### ADJUSTING COOLER SETTINGS

Within the SETTINGS menu of the MagIQtouch Controller is the COOLER sub-heading. Here various settings of the cooler can be adjusted.



#### About Appliance

Displays information such as model number, serial number and software version for all coolers connected to the controller.

#### Night Quiet Mode

Restricts fan speed to a specified level during a specified night period.

#### Manual Drain

Turns cooler off and drains the pan (reservoir).

#### Pad Flush

Turns cooler off and runs pump for a specified amount of time.

#### Auto Restart

By turning this option to 'ON', the cooler will automatically restart after a power failure.

#### Drain and Dry

Cooler will drain and fan will run for 1 hour every day at a specified time.

#### Water Manager

Select the preferred water management method:

- Salinity Measurement - replaces water when salinity level reaches set point.
- Timed Drain - drains the pan (reservoir) after 8 pan (reservoir) fill cycles or every 65 minutes (system dependant).
- No Drain Control - salinity control external to electronics eg. continuous bleed.
- No Water Thermostatic - allows thermostatic control in VENT mode. No water present. Cooling performance is limited.

#### Pre-wet

When COOL mode is activated, the pump will run for 90 seconds before the fan is switched on.

#### Salinity Level

Sets the salinity level at which the pan (reservoir) will drain in "SALINITY MEASUREMENT" mode.

#### Tank (Pan) Drain Delay

Sets the time delay before the drain valve opens after the pump in the cooler is turned off.

#### Autostart

Automatically restarts the cooler in the last operating mode after a power outage.

### TESTING THE PUMP

Test the pump by turning the cooler on at the 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.

### TESTING THE DRAIN VALVE

Select the "SETTINGS" mode on the MagIQtouch Controller and select the "COOLER" sub-heading. Select the "MANUAL DRAIN" option to operate and test the drain valve.



## 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.

#### DRAIN VALVE

- 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)
  - Control cable
  - Drain valve
  - Solenoid cable
  - Pump cable
  - Probe 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.
- 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 COOL mode, lowest 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. 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

## FAULT CODES INDICATED BY LED'S ON THE COOLER ELECTRONICS MODULE

### **Fault Code 01 (1 Red Flash) = Communication Failure.**

- Ensure wall control cable is fitted correctly.
- Check the wall control cable is in good condition.

### **Fault Code 02 (2 Red Flashes) = Failure to detect water at probes within 20 minutes.**

- Ensure water pressure is sufficient to fill and maintain the pan (reservoir) to specified level within 20 minutes.
- In areas of hard or polluted water, blockage of the strainer/ filter in the water inlet solenoid valve may restrict water flow.
- Water level set too low. For Braemar coolers the water level should be set to 5mm below the float valve base.
- Ensure probe plug is properly connected.
- Plug connections at electronic module are upside down or misaligned.
- Water too pure for the probes to sense water is present.
- Pressure build up in pipes can lock up the solenoid valve when a non-return isolation valve is used in the water supply line. It is recommended to use a ball valve, i.e. NOT a non-return type of shut off valve.
- Check drain valve is closing and not cycling due to debris being caught under drain valve washer.

### **Fault Code 04 (4 Red Flashes) = Failure to clear probes during drain within 20 minutes.**

- Check the drain valve opens and water drains from the pan (reservoir), with nothing obstructing the outflow of water. (e.g. drain hose kinked)
- Excessive drain hose lengths or bends cause air locking and won't allow water to drain.
- Build up of foreign material in drain hose not allowing water to drain away correctly.
- Screws used to fix drain hoses to drain adaptors restricting water from draining from pan (reservoir).
- Drain valve has failed to open when drain was initiated.
- Inlet water solenoid not shutting off water when the drain is open.
- Water will only flow one way through the inlet water solenoid valve. Therefore, it must be installed correctly. Directional arrow must be pointing towards the float valve assembly. If not, water will not shut off. (Directional arrow can be found on the bottom of the solenoid valve body).
- Debris interfering with water sensor probes.
- Probes not clipped onto mounting brackets correctly.
- Check cooler is level and water drains quickly.

### **Fault Code 07 (7 Red Flashes) = Motor Error**

- Check motor power and communication cables are connected to the ICPMD.
- Ensure fan is free to spin

## TROUBLE SHOOTING

Symptom	Cause	Action
<b>Inadequate cooling</b>	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.
	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.
<b>Noisy cooler</b>	Fan out of balance due to dirt, etc.	Clean the fan.
	Too much back pressure. Tight duct bends. Grilles too small.	Re-evaluate design; improve duct layout; change grille sizes.
<b>Pump fails to operate.</b>	Circuit breaker tripped.	Check pump for faults. Replace if necessary.
	Pump motor failure.	Replace pump.
<b>Fan fails to start.</b>	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.
<b>Pump runs but no water circulation or Pump runs but pads lack water</b>	Insufficient water in pan (reservoir).	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
<b>Continuous overflow of water.</b>	Float valve adjustment not correct.	Adjust float valve.
	Heavy pad deposits.	Clean or replace pads.
	Drain valve failure.	Replace drain valve.
	Water solenoid is installed incorrectly.	Check installed in the correct water flow direction
<b>Water entering cooler outlet.</b>	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.
<b>Unpleasant odour.</b>	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" for 10 minutes after cooling cycle to dry pads out.
	Heavy pad deposits.	Clean or replace pads.





## Cooler Installation Manuals

Now provided on the internet  
available in English and Spanish  
Refer [www.seeleyinternational.com](http://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](http://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.

