



INSTALLER'S MANUAL

Evaporative Air Coolers

Safety Information
Installation
Commissioning

Models

Classic Evaporative Air Coolers:
KC17 | KC21 | KC27 | KC32

Low Profile Evaporative Air Coolers:
KL16 | KL22 | KL25 | KL28



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WARNINGS AND IMPORTANT INFORMATION



READ ALL INSTRUCTIONS BEFORE INSTALLING OR USING THE APPLIANCE.

Failure to carefully read and follow all instructions in this manual can result in equipment malfunction, property damage, personal injury and/or death.

WARNINGS: WHEN IGNORED, CAN RESULT IN SERIOUS INJURY OR DEATH.

CAUTIONS: WHEN IGNORED, CAN RESULT IN MINOR INJURY OR PRODUCT DAMAGE.

SHALL / MUST / IMPORTANT: INDICATES A MANDATORY REQUIREMENT OF THIS MANUAL.

SHOULD: Indicates a recommended requirement of this manual.

Any deviations from these instructions may void the warranty. As a result, the customer and/or installer may be charged a fee for product non-warranty related call outs. Also, note that failure to comply with these instructions may preclude servicing the unit.

DISCLAIMER: This document is a guide only. Laws, regulations and industry standards can vary between States and Territories.

Accordingly, this guide **MUST BE** read in conjunction with, and subject to, all laws, regulations and industry standards applicable in the State or Territory in which the products are installed.

You **MUST** ensure that the installation of the products will comply with those laws, regulations and standards, and that the products recommended to customers are fit for the purpose for which they are intended.



REGULATORY / INSTALLATION

This appliance shall be installed in accordance with:

Manufacturer's Installation Instructions.

Current AS/NZS 3000 (electrical codes).

Local Regulations and Municipal Building Codes including local OH&S requirements.

Local water authority regulations

Duct fixing regulations, EPA guidelines and HB276-2004 "A Guide to Good Practice"

ALWAYS comply with the following precautions to avoid dangerous situations and to ensure optimum performance.

This appliance **MUST BE** installed, maintained and removed by an Authorised Person.

This appliance is heavy, use 2 people or mechanical lifting device. Improper lifting may result in serious injury.

Take care when opening or unpacking this appliance. Failure to do so may result in serious injury or product failure.

DO NOT modify the electrical wiring of this appliance. If the control power wiring is damaged or deteriorated then it **MUST BE** replaced by an authorized person. Failure to do so may result in electric shock, fire, serious injury or product failure.

DO NOT install or service the Cooler during adverse weather conditions, or drain water onto the roof where it could cause a slippery and hazardous work environment.

MODELS COVERED IN THIS MANUAL

Kaden Low Profile	KL16	KL22	KL25	KL28	Kaden Classic	KC17	KC21	KC27	KC32
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1. GENERAL GUIDELINES

1.1 UNPACKING THE COOLER

The unit is supplied on a pallet and enclosed with protective packaging.

To unpack:

- Carefully remove the outer packaging and any retaining brackets/straps that secure the cooler to the pallet.

Kaden coolers **MUST BE** installed in accordance with these instructions and related regulations, codes, standards, and authorities. These include but may not be limited to:

- Kaden Sizing Guide
- AS 3500.2 - Plumbing & Drainage
- AS 4254 - Ductwork for air-handling systems in buildings
- Local Building Regulations
- HB 276 - A Guide to Good Practice
- Environment Authorities
- Local Plumbing and Electricity Authorities
- Building Code of Australia (BCA)

1.2 UNLOADING THE COOLER

When lifting the cooler onto the roof, ensure the lifting equipment is in good operating condition and capable of lifting the total weight. Be sure there is a clear area to place the cooler down, which is within reach of the lifting equipment.

1.3 COOLER POSITIONING

The Cooler shall be installed in a position that allows adequate and safe access for service, and enables only fresh outside air to be drawn into the unit. The cost of any equipment and additional labour involved in accessing cooler installations will not be accepted for warranty purposes.

Avoid positioning the cooler near any source of smoke, dust or objectionable fumes so that only fresh outside air will be drawn into it. Coolers should not be sited close to the windows or bedrooms of neighbouring houses.

The cooler shall not be installed within a 5m (6m in W.A.) radius of a sanitary vent, 1.5m radius from a gas appliance flue terminal and 3m horizontal radius from a wood stove flue terminal.

1.4 WEATHER PROOFING

All ductwork, electrical cables and water pipes **MUST BE** flashed and sealed, to prevent water entry into the building. Exposed ductwork **MUST BE** weatherproofed and coated with reflective aluminium paint.

1.5 INSULATION

It is important that ducting should be well insulated. It is mandatory under some building codes to install insulated, fire rated ducting on Evaporative Cooling systems. Check with your local authority.

1.6 INSTALLING DUCTWORK

The duct system should be designed and installed in accordance with the following:

- These installation instructions.
- Standard engineering practices.
- Kaden Sizing Guide and Installation Guidelines.

1.7 SYSTEM

The installation unit **MUST** comply with all laws, regulations and industry standards applicable in the state or territory in which the products are installed.

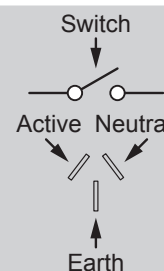
2. COOLER SERVICE REQUIREMENTS



A qualified electrician **MUST** install the 240 Volt wiring according to local regulations.

Switch OFF the power and unplug the Cooler before touching any wiring. If any electrical wiring is damaged, it **MUST BE** replaced by the manufacturer, its service agents or an electrically qualified technician, in order to avoid a hazard.

The electricity supply **MUST BE** 240 Volt / 50 Hertz, and from an authorised power supplier. Generators should **NEVER** be used, as their output may be incompatible with or damage the Cooler's electronic control system.



2.1 ELECTRICAL POWER SUPPLY TO THE COOLER

The Cooler is pre-wired with a 3-pin plug and lead, and should be plugged into a standard 10 Amp - 240 Volt fixed switched socket outlet located within the roof cavity, in close proximity to the dropper duct. The fixed switched socket outlet should be wired back to the meter box on a dedicated power circuit.

2.2 WATER SUPPLY TO THE COOLER

The Cooler's water system is designed to operate with a water supply pressure between 300 kPa and 1000 kPa. If the supply pressure is excessive, a pressure-reducing regulator will be required. If the pressure is insufficient the Cooler's operation will be compromised. In areas subject to water pipes freezing, provision **MUST BE** made to drain water piping to prevent damage to the Cooler.

- Ensure the supply piping has been flushed before connecting it to the Cooler.
- A registered licensed plumber **MUST** install the water supply piping and connection to the Cooler in accordance with the local water supply regulations.
- An isolating valve on the supply pipe **MUST** be placed external and adjacent to the unit, not inside the ceiling. This **MUST BE** provided to facilitate isolation of the water or to disconnect the water supply piping when servicing.
- Non-return isolating valves on the water supply are not recommended as they may cause damage or lock up the Cooler's inlet mechanism where high lock-up pressures or freezing water in pipes may occur.
- For the owner's convenience, an additional isolating valve may be provided at ground level to isolate the water supply.
- The water supply pipe **MUST BE** supported and secured so as not to place strain on the Cooler's water connection fittings or cause water hammer noise.
- Water quality should be checked and filtration fitted where necessary e.g. tank or bore water.
- **DO NOT** remove water supply line, (braided hose) from rear of cooler.

2.3 INSTALLING THE WALL CONTROL

The Kaden Networker and Manual Wall Controls are part of a sophisticated control system. Controllers with Auto mode constantly monitor the temperature inside the house, switching the Cooler ON and OFF to maintain the target comfort level selected. To do this effectively, the wall control **MUST BE** positioned correctly:

- **Install the wall control within the area being cooled:** It is important that the Wall Control is placed in a position that will provide the most accurate reading of the temperature within the area being cooled.
- **Attach to an internal wall:** The temperature difference on an external wall can affect the reading, so always mount the wall control on an internal wall. Also keep the hole in the wall for your wiring as small as possible to prevent draughts from within the wall cavity affecting the temperature sensing.
- **Get the height right:** The Wall Control should be approximately 1500mm above floor level.
- **Avoid hot spots:** Keep it as far away as possible from heat sources, e.g. above electrical equipment, direct sunlight and walls backing onto wall-ovens and stoves.
- **Avoid cold spots:** Ensure that the Wall Control is not affected by draughts coming through doorways, windows and stairwells, and is not placed too close to cooling outlets.
- **Avoid dead spots:** Don't site it in areas with no or little circulation, e.g. behind doors, in corners or alcoves.
- **Interference from other electrical connections:** Ensure the thermostat and wiring are kept away from other electrical, data and antenna cables.
- **Use the right cable:** Loom is supplied with the Manual and Programmable Wall Control.

3. COOLER HARDWARE

3.1 BENDS AND ELBOWS

- Where square ducting elbows are to be used, install turning vanes within the elbow to aid airflow.
- Use unrestricted ductwork with smooth changes of duct cross section.
- Bends in ducting should have a large radius and branches should have shallow angles.

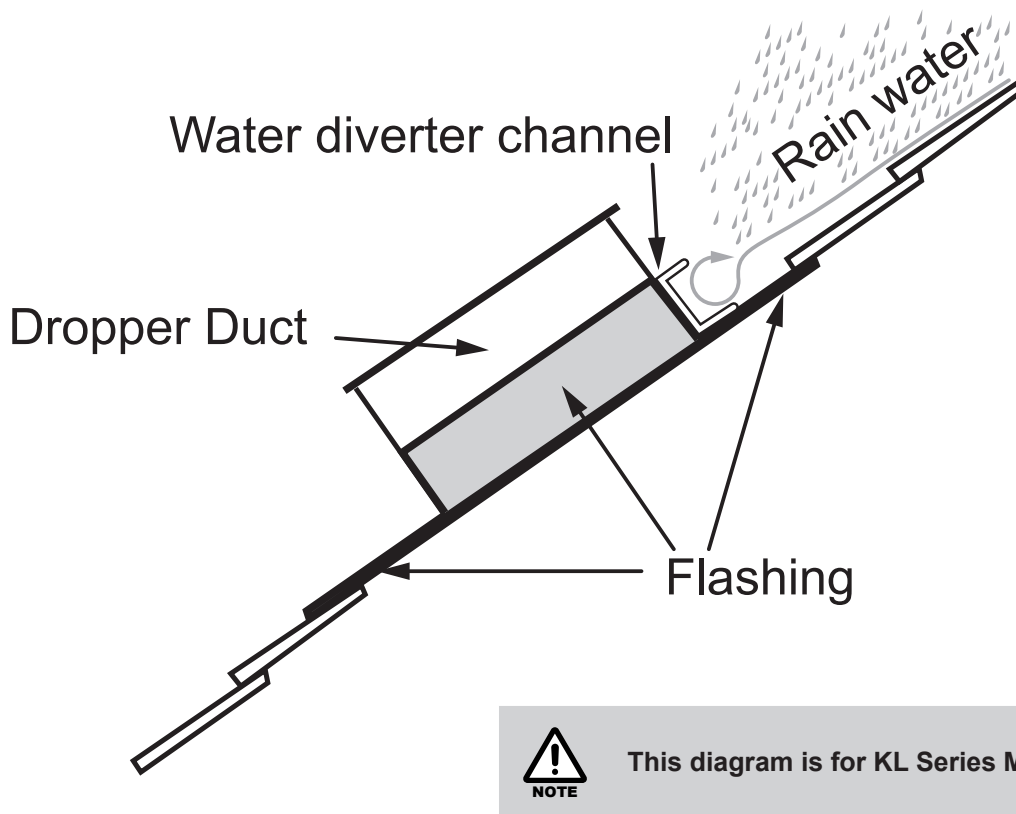
3.2 DAMPERS

Dampers may be required to balance the air distribution of the duct system.

3.3 FIX AND SEAL THE ROOF FLASHING

The roof flashing **MUST BE** fixed and sealed to the dropper duct to prevent water entry into the building. Ensure that the screws or rivets **DO NOT** protrude into the dropper duct more than 8mm.

Installations where the Cooler is more than 4m downstream from the roof peak should be fitted with an additional water-diverting channel on the dropper duct high side, that extends beyond the dropper duct sides by at least 50mm (see diagram below).



3.4 DROPPER DUCT INSTALLATION GUIDELINES

- The dropper duct on which the Cooler is mounted **MUST BE** properly secured to the roof structure or timbers.
- Ensure the dropper duct does not contact the ceiling joists or other structural members that can transmit vibration.
- If possible, the dropper duct should be positioned to the rear or on the service side of the home.
- It should also be as far down the roof as practicable.
- It is recommended a diffuser or cone be fitted in the base of the dropper box. This will assist distributing the airflow evenly into the duct system and can also reduce noise levels.

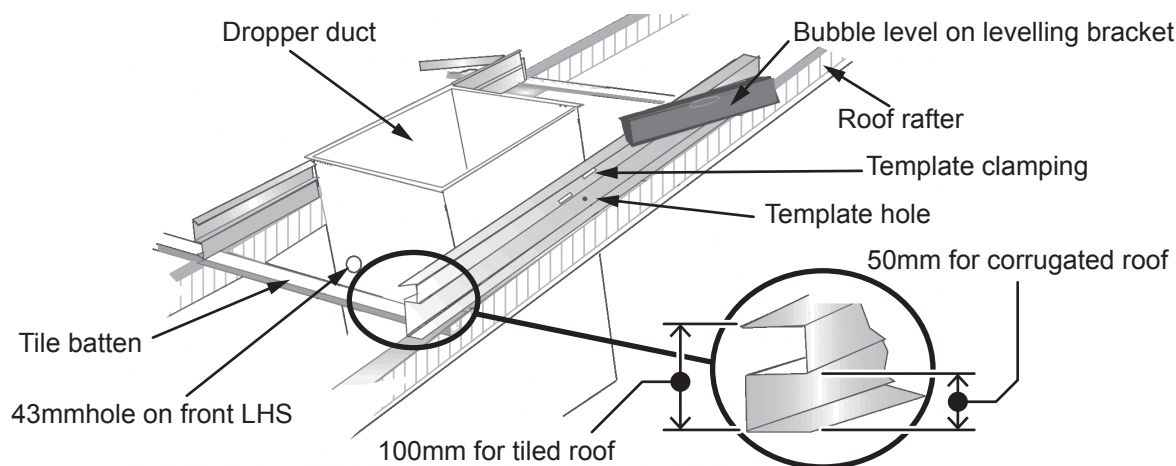
4. INSTALLATION - LOW PROFILE (KL) SERIES

4.1 KL SERIES DROPPER DUCT INSTALLATION

- The dropper duct size for all KL Series Coolers is 550mm X 550mm.
- KL Series Coolers **MUST** use a dropper duct with an out turned flange (15-20mm). This is installed on an angle through the roof.
- A spirit level is needed to set the correct angle to the dropper duct. Kaden levelling templates are advisable.
- Determine the point of penetration through the roof and prepare the opening according to the type of building construction and roofing material.
- Frame the roof rafters to the correct width to suit the dropper duct.
- Position the 2 templates to each side of the dropper duct, under the out turned flange, and with the right angle bracket hard against the dropper duct corner.
- The templates provide a 50mm clearance (mid-level) for corrugated iron roofs, and 100mm clearance (top of template) for tile roofs, to give the correct height through the roof opening.
- Use the 50mm template position when resting the templates on top of the corrugated iron roof material, whereas the 100mm template position is used with the templates placed on the roof tile batten.
- Clamp the templates in position, or use a screw or rivet through the template hole provided to securely hold them to the dropper duct.
- Insert the dropper duct between the roof rafters (see diagram).
- Ensure the template levelling bracket is positioned on the high roof side of the dropper duct.
- Rest the templates equally on the tile battens or roof timbers, at both sides of the dropper duct.
- Place a spirit level on the templates levelling bracket, and raise one of the template ends (if necessary) until a level plane is reached.



Levelling templates DO NOT come as standard, and MUST BE ordered separately, part number 1621272.



- Depending on the pitch of the roof, either the lower or the higher template end will need raising, to level the bracket.
- This procedure will also locate the correct dropper duct height through the roof opening.
- When the template bracket is level, mark and/or fix the dropper duct to the roof frame timbers using bolts or coach screws.
- Be sure to use the level on both template sides to correctly position the dropper duct.
- The unit's power supply and wall control leads are pre-wired to the Cooler control module.
- These leads feed down from the base inside the dropper duct, and then out into the roof cavity through a 43mm hole in the dropper duct.
- This hole **MUST BE** on the left-hand-side on the low side of the roof. This will accommodate the loom grommet and allow the wires to be retracted from the dropper duct.



The Cooler outlet has an 8mm clearance from the dropper duct for the bolt or screw heads.

4.2 FITTING THE WINTER-SEAL



The Winter Seal fits directly into the base of the cooler and **MUST BE** installed before the cooler is mounted onto the dropper box (preferably while the unit is on the ground).

For detailed instructions please refer to "6. Fitting the Winter-Seal" on page 12.

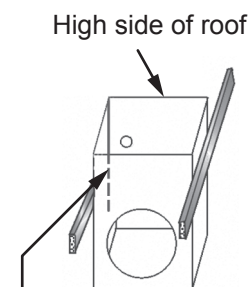
4.3 FITTING THE KL SERIES COOLER

- The Cooler should now be mounted into position. Insert the Cooler's air outlet fully into the dropper duct.
- Ensure the Cooler base sits fully on the dropper box flange and that the base latching brackets (four) retract over the flange on both sides of the dropper, to lock it onto the dropper duct.
- Fold the end of all four latching brackets in towards the dropper box. Using the hole at the end of the latching bracket as a guide, drill a 3mm pilot hole through the dropper box only. **DO NOT** penetrate the plastic chassis. Four 8g x 1/2" stainless steel screws should be inserted to secure the four latching brackets to the dropper box.
- The Cooler's smallest filter pad and the water supply connection fitting **MUST BE** on the high side of the roof.
- Ensure the 3 pin power plug and lead, together with the Wall Control connection lead, are also fed to the inside of the dropper duct before retracting the wires and fitting the grommet.

5. INSTALLATION - CLASSIC (KC) SERIES

5.1 KC SERIES DROPPER DUCT INSTALLATION SPECIFIC

- All KC Series Coolers sit on a 550mm x 550mm dropper box with a 15-20mm out turned flange.
- KC Series Coolers can also be installed on an existing dropper box. Ensure the dropper box is in a sound condition and the top of the dropper box is level.
- The dropper box **MUST BE** positioned as per the following diagram.
- Secure the dropper duct vertically, so the Cooler is level when placed on top of it.
- Ensure the 3 pin power supply plug and lead, the Wall Control Loom connection lead, and the rubber grommet, are fed to the inside of the dropper duct.
- Cut a 43mm hole in the dropper duct below the roof line, on the left-hand-side on the low side of the roof, to accept the wiring grommet. This will allow the 3-pin plug and lead, and the Wall Control Loom connection lead to be withdrawn from the dropper into the roof cavity.



Cut hole in this position using 43mm hole saw below roof line to accept wiring grommet in this corner. (Closest to Cooler Control Box)

5.2 FITTING THE WINTER-SEAL



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For detailed instructions please refer to "6. Fitting the Winter-Seal" on page 12.

5.3 FITTING THE KC SERIES COOLER

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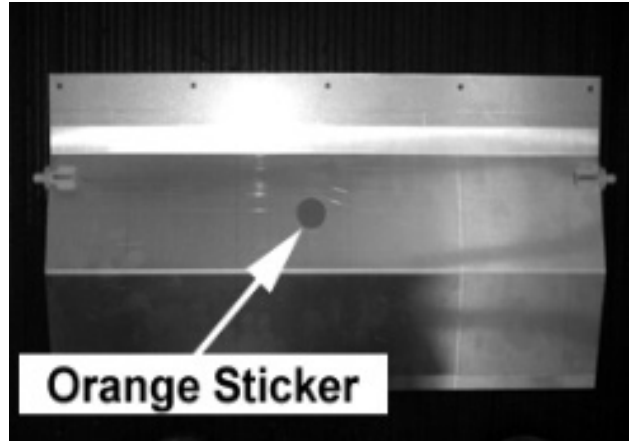
6. FITTING THE WINTER-SEAL

1. Gently remove all packaging from the cooler.

Remove the front support bracket that is fitted to the base of the cooler and secures the cooler onto the pallet.

Then lift the cooler off the pallet onto the ground.

Remove the Winter Seal blades from the packaging, and note the orange sticker on one side of both blades.



2. Gently lift the cooler up so that the air outlet on the cooler's base is visible.

Be sure not to scratch or damage the sides of the unit.



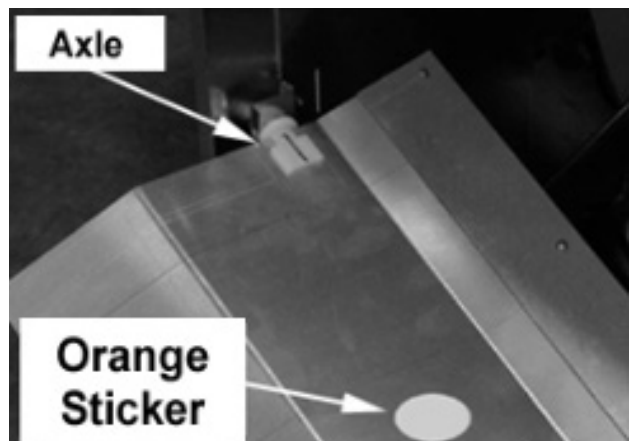
3. The Winter Seal can only be installed one way up because they are counterweighted on one side. If the Winter Seal blades are installed the wrong way up they will fail to open properly.

There will be an orange sticker on one side of both blades; this sticker should be facing down once the cooler is in its final position on the dropper box.

This means that when you are looking at the base of the cooler the sticker should be visible when the Winter Seal blades are closed.



4. Insert one axle of the Winter Seal blade into the hole provided in the mounting bracket on the base of the cooler.



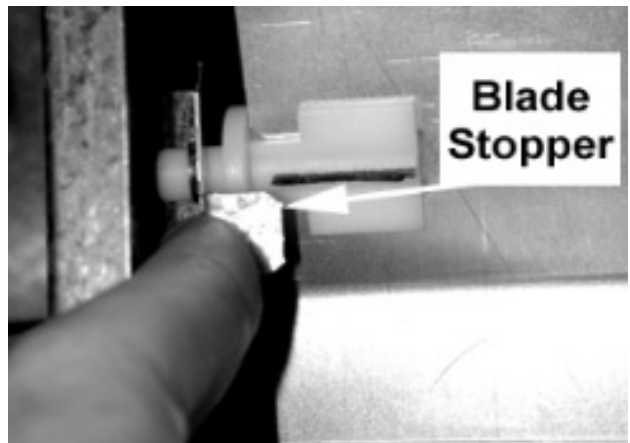
5. Gently push the opposite mounting bracket and lock the axle into the hole on the mounting bracket.

Then straighten the mounting bracket to its original position.



6. Ensure that the mounting brackets are all straight and that the stoppers on each mounting bracket are in the correct position, preventing the blades from over pivoting.

Repeat steps 3-6 for the second Winter Seal blade.

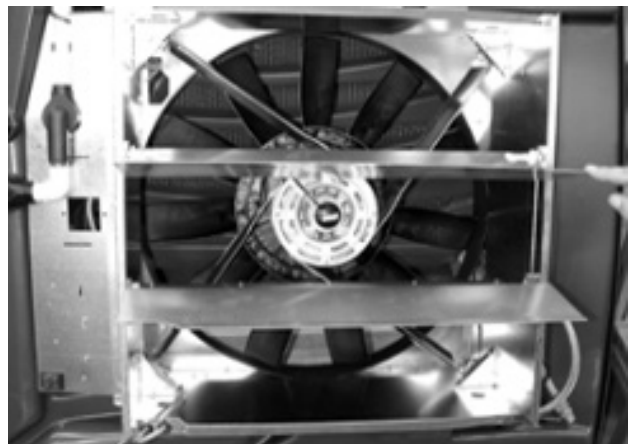


7. Ensure that both blades pivot freely, and the orange sticker is visible from underneath.

Then proceed with mounting the cooler refer to sections:

"4.3 Fitting the KL Series Cooler" on page 10

"5.3 Fitting the KC Series Cooler" on page 11



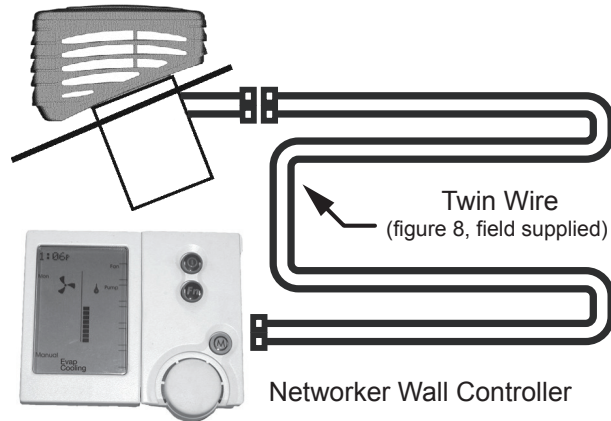
7. WALL CONTROLLER CONNECTION

7.1 WIRING THE KADEN NETWORKER WALL CONTROL

The Networker backing plate has 4 terminal points for the connection of Thermostat wires. When connecting, use the top 2 terminal points marked TW1 and TW2 or the bottom 2 terminal points also marked TW1 or TW2. Never use a combination of terminals when connecting to a single appliance.

For example; A Networker operating a cooler and a heater would have the 2 bottom terminals connected to the heater and the 2 top terminals connected to the cooler.

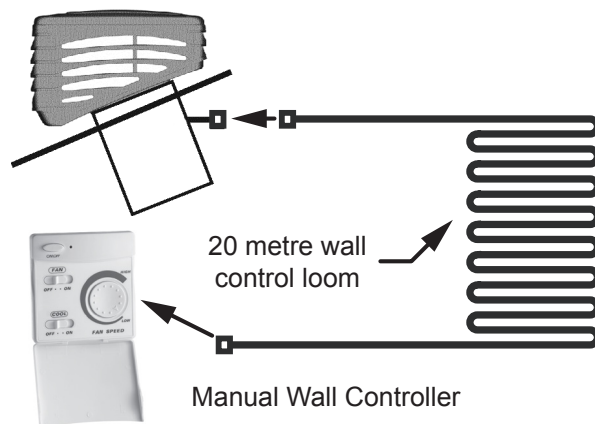
Run a twin wire cable (i.e. figure 8 cable - 0.75mm²) from the Cooler to the Networker.



- Remove the backing plate from the Networker by unclipping it at the sides.
- Draw the wires from the wall cavity and feed them through the opening in the backing plate, connect the cable to the terminal connections on the backing plate before mounting it on the wall and re-assembling the Networker.
- Connect the cable to the Networker connection lead terminal block at the Cooler.

7.2 WIRING THE KADEN MANUAL WALL CONTROL

After the Cooler's power supply and pre-wired wall control leads are fed down from the base into the roof cavity, connect the 20-metre wall control loom plug to the cooler's lead plug.



- Ensure the wall control is positioned so that it is within reach of the cooler using the 20-metre wire loom assembly supplied.
- These Wall Controls accept the polarised plug connection.

The Manual wall control has a small loom to connect the polarised plug to.



All models can have either the Kaden Networker wall controller or the Kaden Manual wall controller.

8. WATER CONNECTION

8.1 INLET CONNECTION

The water inlet connection point is under the cooler base on the left hand side, at the high side of the roof. The connection is via a 1/2" BSP female fitting supplied on a flexible hose.

8.2 TANK WATER QUALITY MANAGEMENT.

An electronic water level sensor automatically maintains the correct water level within the tank. The cooler is programmed to periodically flush the tank and refill it with clean water, depending on the operating conditions, and automatically maintain the water quality within the tank.

8.3 WATER DRAIN CONNECTION

Cooler units have a drainage connection point at the underside of the base, on the low side of the roof.

When the cooler's discharge is likely to fall on a roof or catchment area for potable water, or water reuse, then a drain **MUST BE** fitted. In some municipalities it is mandatory to fit a drain to the cooler. Check with the local authority regarding the regulations.

Where required it is recommended the drain outlet be plumbed to a suitable point in order to disperse the waste water away adequately without causing damage or nuisance i.e. overflowing roof guttering, accelerated corrosion.

There are two recommended options when connecting drainage to the unit:

- Option one is for a small diameter pipe, which **MUST** slide over the Ø19.8mm fitting detailed in Figure 1.
- Option two is for a larger diameter pipe and prior to connection, the snorkel outlet **MUST BE** modified by cutting and de-burring at the "CUT LINE" shown in Figure 1. Once complete, slide on the large diameter pipe, drill a pilot hole Ø3mm and secure with a 8gx3/8 stainless steel screw as shown in Figure 2.

Ensure that all field supplied drainage pipe is rigid (not flexible) and UV stabilised.

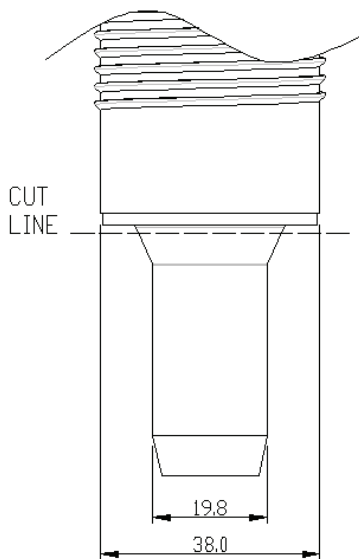


FIGURE 1

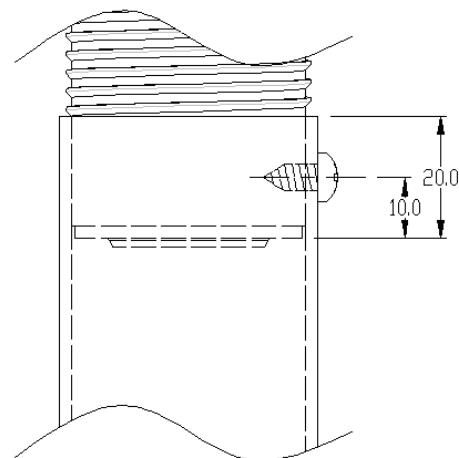


FIGURE 2

Ensure any drain has a continuous fall, the joints and fittings are adequately sealed, and that all penetrations in and out of the roof cavity are sealed against water entry into the building.

The drain pipe **MUST** also be properly supported along its entire run, and **MUST NOT** place strain on the Cooler's outlet fitting or base.

For installations on tiled roofs where a drain may not be required, it is recommended a water distribution spreader be fitted to the Cooler's drain outlet.

9. TIMING & COOLER FUNCTIONS

9.1 START UP

Kaden Cooler with Dump Valve fitted will have a 15 second delay on start up.

If the Cooler has been OFF for longer than 60 minutes the tank will require refilling. Allow approximately 3-5 minutes depending on the water pressure.

9.2 PRE-WET

The Cooler has been pre-programmed to automatically saturate the filter pads when the pump is turned ON.

Pre-wet is the process of running the pump and wetting the pads without the fan operating ensuring full pad saturation and optimum cooling potential when the fan starts.

Pump Off Time	Pre-wet Time
Less Than 2 minutes	No Pre-wet
Between 2 and 10 minutes	Pre-wet 1 minute
Longer than 10 minutes	Pre-wet 4 minutes
Longer than 60 minutes	Tank has to be filled, therefore total time including Pre-wet is 5 to 7 minutes

9.3 PROGRAMMABLE WALL CONTROL MODELS IN AUTO MODE

These models operate similar to the Manual wall control models but in auto mode the Pre-wet operates slightly differently.

If the Cooler has been OFF for longer than 15 minutes it will begin with a 2 minute Pre-wet, then turn OFF the pump and start the fan.

Depending on the room conditions and the wall control setting the Cooler may perform another Pre-Wet (as described previously) when the pump is turned ON again, forcing the fan to turn OFF for that period.

9.4 TANK WATER QUALITY AND REPLENISHMENT DURING OPERATION

During the Cooler's operation with the pump operating, the Cooler will be evaporating water from the tank and automatically refilling itself.

Cooler units will periodically, after a specified number of tank refills, flush out the tank (discharging water from the drain outlet for approximately 1 minute) without stopping the Cooler.

How frequently this flush occurs will vary according to local water conditions and the rate of evaporation.

9.5 SHUT-DOWN TIMES

When the Cooler is turned OFF at the end of use, the controls are programmed to wait 60 minutes before commencing Shut-down.

This Shut-down procedure starts with draining the tank (approximately 60 seconds). Then a wash cycle is performed to clean the tank for approximately 30 seconds.

10. DISMANTLING

10.1 REMOVING THE FRONT AND REAR PADS

For general servicing, remove the front and back pads to access all components.

- Loosen the 4 plastic thumbscrew knobs on the cooler's roof until the large front pad can be lifted up enough to clear the bottom edge.
- Swing the large front pad out at the top edge.
- Remove the 2 thumbscrews above the small back pad completely.
- Raise the roof until the small back pad has enough clearance at the top to be removed.
- With the front and rear pad frames removed, the filter pads simply slide up and out of their frames.

10.2 REMOVING THE SIDE PADS

Remove the front and back pads as above, then:

- Disconnect the 19mm clear hose supplying water to the roof distribution spreader at the fitting in the cooler's base (squeeze clip then pull to release).
- Ensure that all thumb screws have been removed.
- Remove the roof assembly.
- Slide the filter pads up and out of their frames.

10.3 DISMANTLING THE FRAMEWORK

Complete all the steps above then:

- From the front of the unit remove all four 10g screws securing the posts to the base caps.



Be aware that the top brackets are glued to the posts, and cannot be separated.

- Lift up and remove the 4 PVC support posts, disengaging the pad's restraining angle brackets.
- Slide the side pad frames out from the formed brackets at the base of the frames.
- Remove the side pad frames and external panel assemblies.

11. COMMISSIONING CHECKLIST



Switch OFF the power and unplug the Cooler before touching any wiring. Care **MUST BE** taken to ensure electrical components have been isolated before performing any service work, i.e. water inlet valve. Only an electrically qualified technician should carry out any service to electrical wiring.

11.1 ISOLATING SWITCH

Cooler units have an external power-isolating switch to facilitate servicing.

The switch is located under the front left hand side of the cooler. To access the switch, reach under the front of the Cooler's trough and locate the switch. By observing the LED light on the control box you can ascertain whether the power is on or off. Always test for electrical voltage before commencing any work on the cooler.

11.2 CHECKLIST

- The isolating valve on the water supply is turned ON.
- The water tank fills with water and the water inlet valve closes when the tank is full.
- There is no foreign matter in the water tank or fan housing.
- The pads are correctly located.
- The pump operates when turned ON at the Wall Control.
- The fan operates through the entire speed range.
- For even water distribution with the pads in position and the Cooler in operation.
- The water drains completely from the tank and that any external drain piping is not blocked or restricted.



New cooling pads should be thoroughly flushed before use so, following commissioning, run the pump for 30 minutes without the fan, and then drain the tank fully. This will prime the pads, flush out some of the new pad odour, and remove any foreign matter that may have settled in the system during transport.

11.3 WHAT TO CHECK IF THE FAN MOTOR WILL NOT START?

- The 10 Amp fuse in the meter box has not blown.
- The Cooler's 3-pin supply plug is correctly located in the power socket.
- For power at the power socket (plug in another appliance and test).
- The isolating switches at the unit and the supply power socket are turned ON.
- The unit is turned ON at the Kaden Wall Control.
- The fan is not in a delay due to tank filling, or pad Pre-Wet operation.
- The motor will spin freely with adequate tip clearance.
- The motor is not hot, causing the auto-reset thermal overload switch in the fan motor to open circuit.
- The motor speed sensor has not been damaged or displaced (where fitted).
- All electrical connections are secure, and if the motor will not start, call **1300 4KADEN (1300 452 336)**.

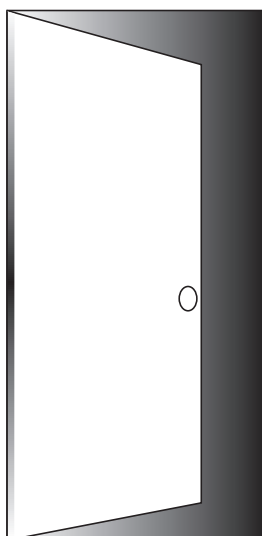
11.4 WHAT TO CHECK IF THE PUMP WILL NOT START?

- The 10 Amp fuse in the meter box has not blown.
- The Cooler's 3-pin supply plug is correctly located in the power socket.
- For power at the power socket (plug in another appliance and test).
- The isolating switches at the unit and the supply power socket are turned ON.
- The unit is turned ON at the Kaden Wall Control.
- The pump is not in a delay due to the tank filling operation.
- The pump impeller is not blocked or obstructed.
- All electrical connections are secure, and if the pump will not start, call **1300 4KADEN (1300 452 336)**.

12. EXHAUST AND VENTILATION



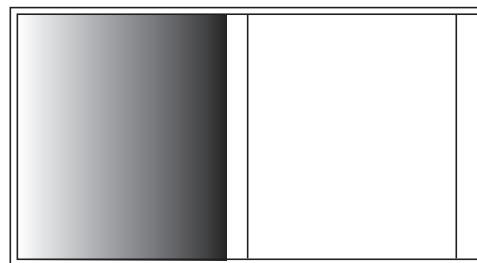
Exhaust fans may be required if insufficient free exhaust area exists. If the exhaust fan is the only exhaust or ventilation outlet, then its capacity should be at least equal to the Cooler's air output.



Door = 1.6m²



Hinged Window = 0.3m²



Sliding Window = 0.7m²

Average ventilation area provided by various openings when fully opened.

Model		Number of average size windows & doors (<i>suggestive only</i>)	Highest Fan Setting	Lowest Fan Setting
Low Profile Series	Classic Series			
KL16	KC17	Two sliding windows or Five hinged windows	1.5 m ²	0.9 m ²
KL22	-	One door and a hinged window	1.9 m ²	1.1 m ²
KL25	KC21	Three sliding windows or one door & two hinged windows	2.3 m ²	1.4 m ²
-	KC27	Four sliding windows or one door and four hinged windows	2.8 m ²	1.7 m ²
KL28	-	Five sliding windows or one door and five hinged windows	3.1 m ²	1.9 m ²
-	KC32	Six sliding windows or one door and six hinged windows	3.4 m ²	2.1 m ²

13. TECHNICAL SPECIFICATIONS

Model		Kaden Low Profile Evaporative Air Coolers				Kaden Classic Evaporative Air Coolers			
		KL16	KL22	KL25	KL28	KC17	KC21	KC27	KC32
Weight (kg)	Dry	47	48	50	51	48	51	51	64
	Wet	59	60	62	63	63	66	66	79
Tank Capacity (litres)		12	12	12	12	15	15	15	15
Motor	Watts	750	750	750	1000	750	750	950	1000
	Amps (Max)	4.9	4.9	4.9	8.0	4.9	4.9	6.8	8.0
Fan Impeller Blades		5	8	11	11 HP	5	8	11 HP	11 HP
Dimensions (mm)	Length	1100	1100	1100	1100	1100	1100	1100	1100
	Width	1100	1100	1100	1100	1100	1100	1100	1100
	Height Front	720	720	720	720	597	682	682	945
	Height Rear	400	400	400	400	-	-	-	-
Minimum Dropper Box Length (mm)		900				1200			
Angle of Dropper Box (degrees)		21°				90°			
Dropper Box Size (mm)		550 x 550 with 15-20 mm Flange out				550 x 550 with 15-20 mm Flange out			
Pad Thickness (mm)		90				90			
Dump Drain Connection (mm)		20 or 40				20 or 40			
Water Connection		Flexible hose connection with 1/2" BSPF thread				Flexible hose connection with 1/2" BSPF thread			
Standard Wall Control		Networker wall control				Manual wall control			
Control Wiring		Twin Wire (Figure 8 cable - 0.75mm ² , (field supplied)				20 metre wiring loom (supplied)			

The manufacture reserves the right to change specifications without notice.

14. TECHNICAL SUPPORT

For technical support please call **1300 4KADEN (1300 452 336)**

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