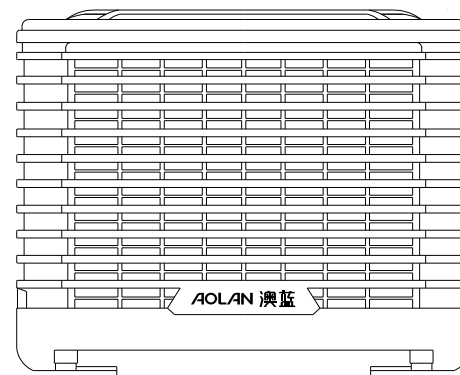




Please read it carefully before installation and operation!

# Manual

Wind's Charisma Series



## Forword

First of all, thank you for your trust and support for us! And Evaporative Air Cooler will bring you comfort and health.

Evaporative Air Cooler, which uses the most advanced evaporation technology, is elaborately produced under advanced management. And this brochure is especially for this series Evaporative Air Coolers. Please read this carefully before use.

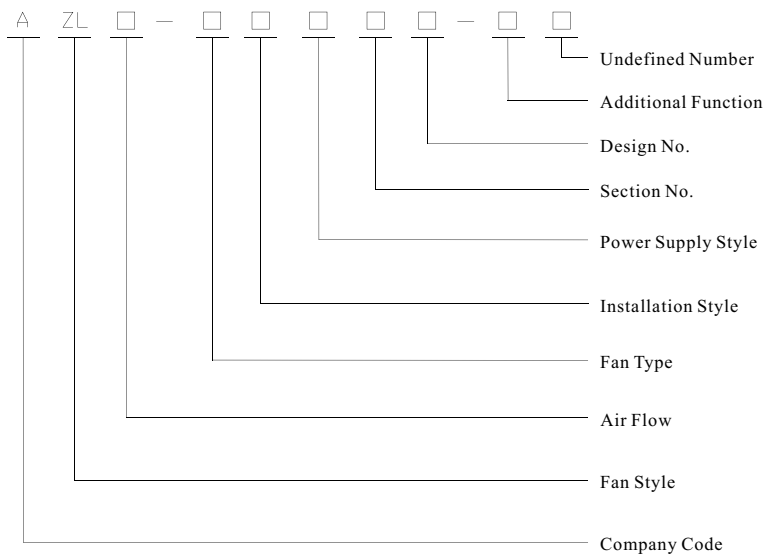
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## Precautions

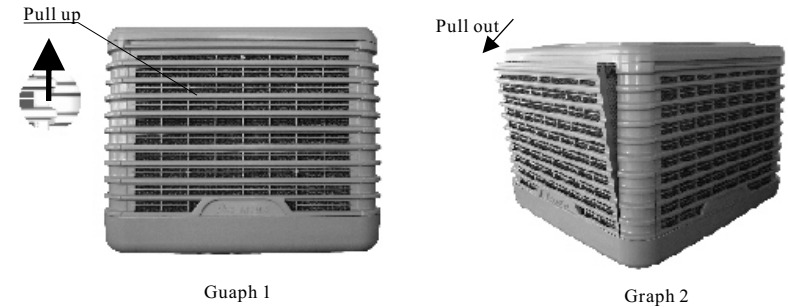
- This series includes:  
Single-phase(220-240V,50/60Hz): AZL18-ZX10B、AZL18-ZS10B;
- Air cooler must be installed in the place which is well ventilated and dry to ensure that it is bringing 100% fresh air into the room.
- Avoid bringing cool air into a closed room, and there must be enough exhaust quantity (at least 0.8m<sup>2</sup> per 3600m<sup>3</sup>/h for natural exhaust, and at least 85% of the airflow for mechanical exhaust), and natural exhaust and mechanical exhaust could be combined.
- When first operated, the air cooler must be debugged, and ensure running currency not exceed rated currency.
- Be sure to prevent it from any source of fire.
- Try to make voltage accord with rated voltage. Air cooler will not start or be on and off repeatedly if the voltage is too low, and it could easily be damaged if being operated under too low or too high voltage continuously.
- On-wall controller and control lines should be kept away from strong electromagnetism interference sources. And you'd better prevent them from being paralleled with the power lines. But if you have to, ensure the parallel space is at least 30cm.
- Please close the air cooler during the rainsquall, or else the fan may absorbs the rain inside.

## Introduction for Evaporative Air Cooler's Model



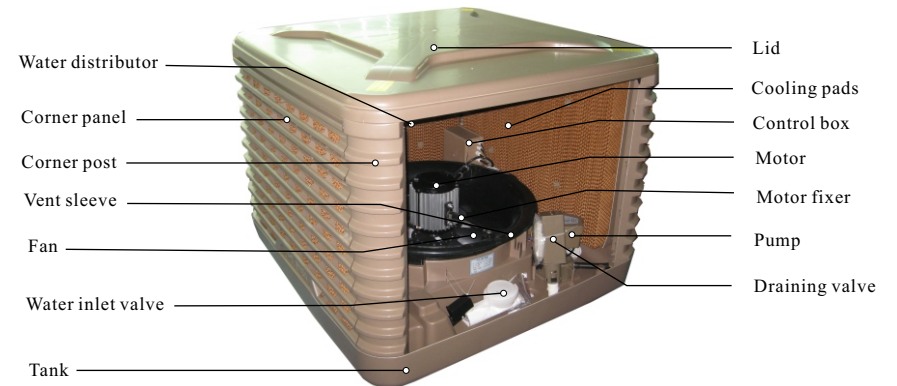
## Guide for Installation

### Guide for Installation and Uninstall of Cooling Pads



- (1) Hold and lift the side panel vertically until it reaches the top lid, as Graph 1 shows.
- (2) Pull it out horizontally to separate the two locating nails from corner posts.
- (3) Press the side panel, and pull it out, as Graph 2 shows.

### Section and Spare Parts



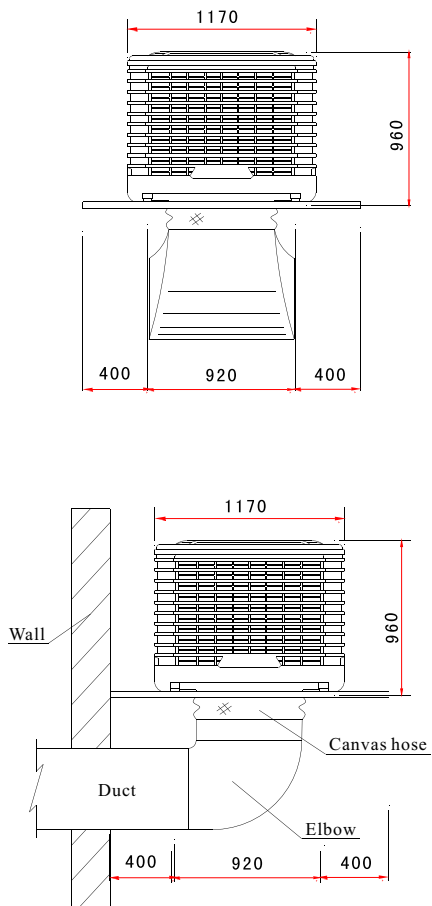
10 Series Controller

● **How to Install**

- (1) The air cooler could be installed on outside wall with a designed hole for the blower (electrical swing grille could be used in order to extend the cooling scope).
- (2) The air cooler could be installed on roof, and a diffuser is designed on the ceiling in the room.
- (3) The air cooler could be installed with a duct to bring the cooled air to where cooling is needed.
- (4) The air coolers could be installed discharging together with one duct, and pushing equipment should be added if necessary.

● **Graphic Examples for Installation**

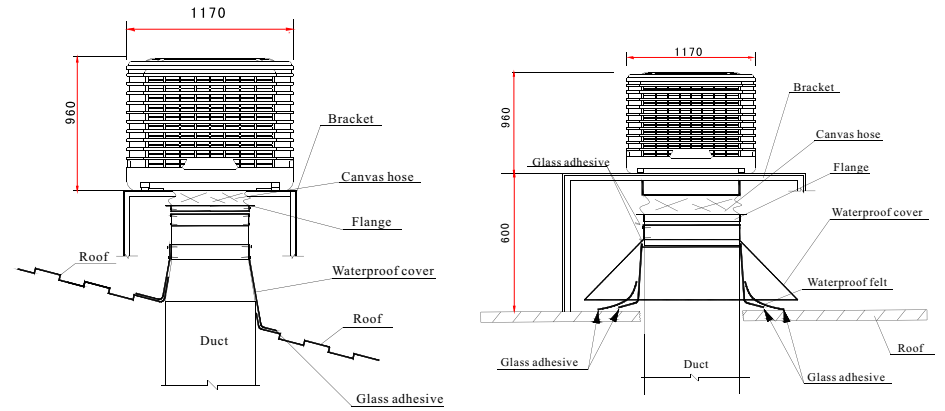
(1) **Down discharge, side wall installation**



PS: the duct outside should be set a certain angle ( $\geq 0.010$  degree) to avoid bringing rainwater into the room.

Installation on side wall

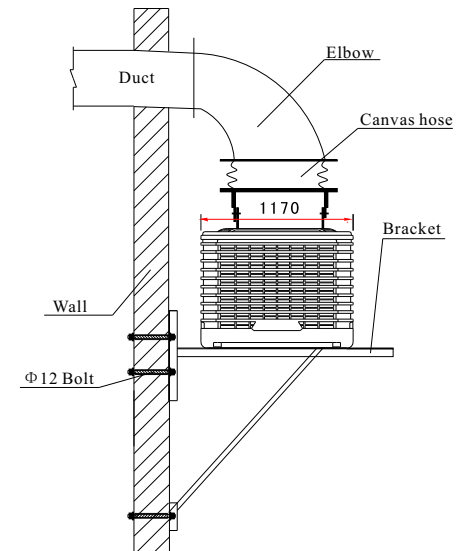
(2) **Down discharge, roof installation**



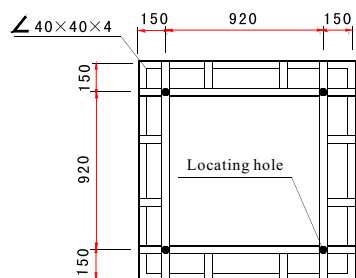
Installation on steel framed and glass tile roof

Installation on cement roof

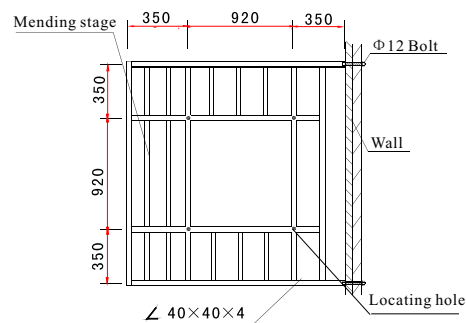
(3) **Up discharge installation**



#### (4) Installation of bracket

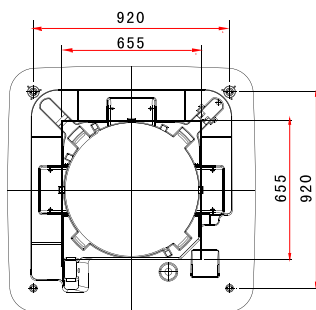


Bracket on roof

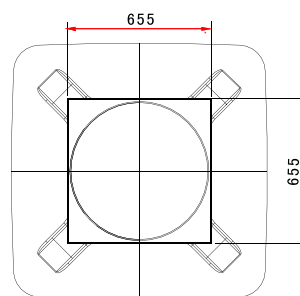


Bracket on side wall

#### (5) Dropper dimension



Down discharge dropper dimension



Up discharge dropper dimension

#### Tips:

As the Graphs show, there are 4 locating holes on the bottom of air cooler. So wherever it is installed, there should 4 steel tubes, whose diameter are 30 mm and height are 35 mm, joined with the bracket, and are fixed in the locating holes, in order to avoid movements of the air cooler.

## Guide for Users

### ● How TO Use 10 Series (LCD Controller)

#### (1) To start the air cooler:

Press “Cool” button to make the air cooler in a cooling mode. The ventilating image will also show up, and the airflow bar will tell present airflow quantity. “Info” area will tell working information, and it will show “—” if there is no information.

#### (2) To stop the air cooler:

Press “off” button to turn off the cooler. And a timing set will be cleared also.

#### (3) Adjusting airflow:

Press “Speed+” button to increase airflow, and press “Speed-” button to decrease airflow.

#### (4) Cleaning:

##### ① Manual clean:

Press the “Drain” button to start draining function. The draining valve will open to drain water out of tank. And press “Drain” button again to stop.

##### ② Auto-clean:

##### I Basic function:

Auto-cleaning function introduction: the water of this air cooler is circulation use, the cool function would be drop after a long time using the water. And the water trough also increases much dust need to clean up, so the air cooler has the auto-cleaning function, to maintain the best cool effect of the air cooler.

The system under starting auto-cleaning function: System movement under cool condition, when arrives the hypothesis the auto-cleaning time, the system turns on the draw-off valve, and then enters the auto-cleaning process.

The system under closing auto-cleaning function: It means the system start the manual cleaning function, press “clean” for a short time, the system begin manual cleaning at once, and show the “cleaning” symbol on the LCD. The symbol will disappear after finished cleaning.

##### Attention:

**While the system is under the cleaning, only press “clean” to stop cleaning (means close the draw-off valve).**

##### II Special function: Set up auto-clean cycle.

Definition of auto-clean cycle: under auto-cleaning function, the time-gap from the finish of last clean to the start of this clean could be define as auto-clean cycle. After turn off the system, cut the power supply plug.

- While turn on the system, press “clean” for about 3 seconds, the system enter the setting of auto-cleaning time. “The network number” on LCD shows “11”.
- Press “Speed+”/ “Speed-” to change auto-clean cycle, the unit is “day”, and the available range is 00-72. When setting as 00, it means close auto-cleaning function, the exwork default is 00; if not, it means turn on the auto-cleaning function.
- Press “power on/ off” for 3 seconds to save this new setting. If the saving is successful, both “the network number” and “info” would show “88” after about 5 seconds, and then back to the normal state.
- If press “Power on/off” short for 3 seconds, the system would quit the new setting and back to the normal state.

##### Tips:

**Draining function could be used whenever the cooler is now on or off .  
Having started this function for 3 min, it will stop automatically.**



**(5) Timing setting:**

a) Timing for stop:

When air cooler is running , press “Timer” button, then press “Speed+” or “Speed- ” to adjust time in hours from 1 hour to 99 hour. Stay on “timer” button for 2sec to confirm the time, and it is successfully settled when “Timer” stops sparkling. And timing function will run and will turn off the machine when timed time is over.

b) Time for start:

When air cooler is off ,press “timer” button to make cooling mode appear. The press “Speed+” or “Speed- ” to adjust time in hours from 1 hour to 99 hour. Press “Vent” to make the machine in a ventilating mode when started, and press “Drain” to make machine drains when started . Stay on “Timer” button for 2sec to confirm the time , and it is successfully settled when “Timer- ” stops sparking, and press “Speed+” or “Speed- ” to adjust airflow. And timing function will run and will turn the machine on when timed time is over.

**Tips:**

If the time of staying on the “Timer” button is less than 2sec, timing setting will be invalid and the timing time will appear “--” .

If there is no comm and during setting, the system will quit timing setting automatically.

The best rinning airflow of 10 series air cooler is between high speed and middle speed.

**(6) Explanation for “Info”**

Information	Explanation	Clean	Remark
--	Normal	---	
01	Control lines are connected incorrectly or interfered	Gone after the problems are solved	
02	Lack of water	Gone when the ater level is normal	
03	Running auto timing draining	Gone when the dranining is finish	Relative funcion is used
04	Water filling	Gone after it finishes	Relative funcion is used

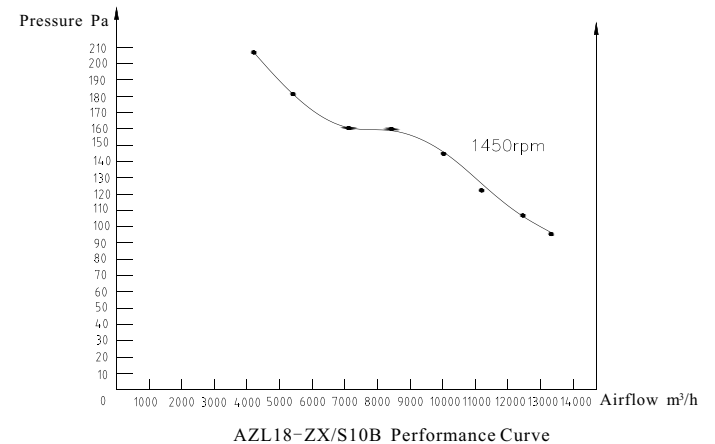
**● Water and Power Supply**

- (1) Clean water should be used, whose pressure is steadily between 0.15 to 0.3 MPa (1.5~3kgf/cm<sup>2</sup>)
- (2) There should be a valve near the water inlet hose and a pipe joint for cleaning.
- (3) Ensure the single-phase voltage is (220~240) ± 10V .
- (4) A switch should be installed in the circuit to protect machine and human from the dangers of creepage and short circuit.

**● Points for Designing Duct System**

- (1) The material of ducts should be galvanized sheets, or glass steel, plastic, aluminum foil sheets, and etc.
- (2) Grilles or diffusers should be installed at the places where cooling is needed. The specification of them could be decided according to airflow and air speed. And the material could be aluminum, wood and etc., and the type could be selected according to actual situations. We recommend Double Deflection Air Grille with 3-6m/s airflows speed, and a damper is recommended.
- (3) The duct should be designed that, the wind velocity is 6-8m/s in the main duct, 4-5 m/s in the branches, and 3-4 m/s at the end.
- (4) The design of the duct system is required to be economical, low resistance and low noise. And to reduce the resistance, the curvature radius of the elbow should not be less than 1.5 times of the width of the elbow.
- (5) The system should not be over 30 meters.
- (6) It is much better to make the duct go straight, avoiding corners and branches, to reduce resistance.
- (7) Auto swing air grilles as well as duct could be used for side discharge air coolers.
- (8) According to different airflows, the duct should be designed with sections of different specifications to be connected together. The longer the duct is, the smaller the section should be.
- (9) The connection between duct and air cooler should be hose, with no temperature preservation design.
- (10)If there are branches, dampers should be fixed to adjust airflow.

**● Performance Curves**



## Operation and Maintenance

### ● Check before Operation

- (1) Is the machine horizontal?
- (2) Is the draining pipe installed?
- (3) Is the water supply system leaking?
- (4) Is the water level normal?
- (5) Is the power connected correctly (especially for 3-phase machine)?
- (6) Are the control lines fixed correctly?
- (7) Are there any sundries in the tank?
- (8) Are there any sundries in the fan or the vent sleeve?
- (9) Is the power or the voltage normal?
- (10) Is the machine running under the rated power scope?
- (11) Is the machine shaking when running?

### ● Maintenance

- (1) The cooling pads should often be cleaned to ensure the cooling efficiency. When cleaning, do not use high-pressure water or hot water (up to 40°C), and clean them by soft brush to remove dust.
- (2) To prevent the machine from freezing or worms, do shut up water supply and drain if the machine will be leaved unused for a long time. Cover it in dusty or snowy circumstance if necessary.

### ● Cleaning

- (1) This series type has fixed time the self-cleaning function (ex-work establishment default for closure self-cleaning, user may act according to actual situation to carry on establishment).
- (2) In order to guarantee the air conditioner moves under the optimum condition, suggests each month of flushing evaporation strainer one time. Dismantles the evaporation strainer the method to for details see “the installation guide the strainer disassembling schematic drawing”.

## Attachment: Trouble shooting

No.	Problem	Possible cause	Suggested Remedy	Remark
1	Air cooler does not work, and buttons fail to respond	Power cut or incorrect power connection	Measure end voltage and connect power correctly	
		Circuit breaker tripped or fuse blown	Reset circuit breaker or replace it	If this happens again, the reason of over-power should be further checked.
		Loose connection between control box and outside machine	Check connections	
		Defective controller.	Replace control panel.	
2	No airflow	Overheat protection for motor.	It will be automatically recovered after 20min.	
		Loose electrical Connections	Check all electrical connections	
		Heat relay or contactor is broken.	Replace it	Check parameters of voltage and power of relay.
3	Pump is working, but inadequate cooling	Inadequate exhaust	Expand exhaust	
		Cooling pads are clogged or dirty.	Clean cooling pads. Or replace it if necessary.	
		Insufficient air discharge openings for spot cooling, causing high temperature partially.	Install air grilles for the places which need cooling	
		Dry pads or lack of water while air cooler is in operation.	Check water distribution system for possible obstruction; check pump	
	Excessive Ambient Humidity	On days during the summer when the ambient humidity is very high, the air conditioner will not reduce temperature as much as on drier days. You could shut off the pump and ventilate more.		
4	Pump fails to work under refrigeration	Pump is broken	replace pump	
		Loose electrical connection	Tighten connection	
5	Pump runs, but not circulates water, or pads lack water.	Pump strainer blocked	Clean strainer	
		Water supply pipe blocked	Clean pipe	
		Water distributor blocked	Clean water distributors	
6	Continuous overflow of water	Water inlet valve adjustment	Adjust water inlet valve	
7	Water being thrown into the room	Cooling pads are badly blocked	Clean or replace it	
		Water distributors moved	Tighten all connections	
8	Unpleasant odour	Air cooler located near source of unpleasant odour; algae in tank water	Clean whole cooler	
9	White deposit in cabinet and on cooling pads.	High salt content of water supply	Drain more frequently	

## ○ Main Technical Parameters

Specifications \ Model	AZL18-ZX10B	AZL18-ZS10B
Airflow(m <sup>3</sup> /h)	18000	18000
Pressure(Pa)	190	190
Power(kW)	1.5	1.5
Voltage/Hz(V/Hz)	220-240/50/60	220-240/50/60
Rated Current(A)	9.3	9.3
Fan Type	Axial	Axial
Motor Type	1-phase/Variou speed	1-phase/Variou speed
Evaporation Efficiency (%)	87	87
Noise(dBA)	≤ 76	≤ 76
Overall Dimension(mm)	1170×1170×960	1170×1170×1052
Dropper Dimension(mm)	655×655	655×655
Dry Weight(kg)	84	90
Operating Weight(kg)	124	140
Automated Cleaning	✓	✓
Water Lack Protection	✓	✓
Discharge Type	Down Discharge	Up Discharge