



emerald

User guide and installation manual

Condensate Pump

ACAV-CPW



IMPORTANT NOTICE

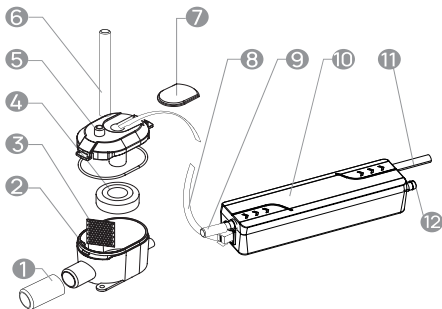
Please read this manual before installing the product and retain for future use. Not following the instructions may result in the product not functioning as intended.

Condensate pump

1. Important notes

- Disconnect the pump from the power supply before any operation.
- For use with water only.
- Risk of electric shock. Not suitable for swimming pools or marine areas.
- If the cord is damaged, replace it with a manufacturer-approved cord or assembly.
- Do not operate the pump without water.
- Ensure the float's metal magnet faces upward and the reservoir is flat and level.
- Suitable for most indoor environments; not recommended for oily or dusty areas.
- Indoor use only.
- Not submersible.













2. Pump component



1	Water inlet pipe
2	Tank
3	Filter net
4	Float
5	Upper cover
6	Air hole (φ6*20)
7	Upper cover plate
8	Induction signal line
9	Water pipe (φ6*1500)
10	Condensate pump assembly
11	Power cord
12	Water outlet port

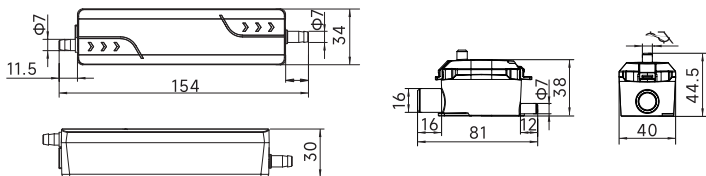
Condensate pump

3. Accessories

Picture	Name	Specifications	Quantity
	Self-sealing bag	14x20cm	1
	Bent pipe	L,75°	1
	Water inlet pip	φ13.5xφ18.5x90	1
	TT-L (Transparent Tube – Long)	φ6xφ9x3000	1
	Pagoda adapter	/	2
	TT-S (Transparent Tube – Short)	φ6xφ9x35	1
	Velcro strap	25x100	1
	Velcro strap	25x40	1
	Ribbon	3x1Q0	2
	Ribbon	5x300	4
	Self tapping screws	Stainless steel ST2_9*12	2
	Variable diameter joint	φ16 to φ25	1

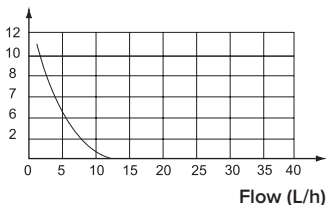
Condensate pump

4. Dimension drawing



5. Flow rate chart

Meters head (m)



Model	Performance (l/h@head)				
	0m	2m	4m	6m	7m
ACAV-CPW	12	10	8	6	4

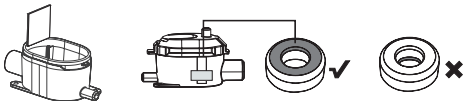
6. Technical specification

Model	ACAV-CPW
Voltage	220-240V/50-60Hz
Discharge head	Max.7m(23ft)
Flow rate	Max.12L/h(3.2GPH)
Suction lift	Max.2m(6.5ft)
Tank capacity	35ml
Power consumption	3W
IP Protection	IPX4

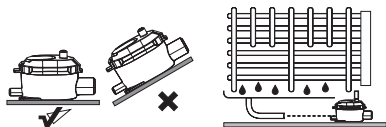
Condensate pump

7. Installation procedure

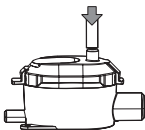
1. Ensure the float is in the reservoir with the magnet facing upward, the filter fitted, and the lid clipped securely.



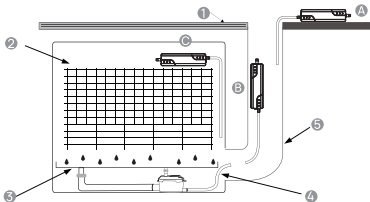
2. Secure the reservoir in a horizontal position using the Velcro strap. For inline reservoirs, connect the inlet hose firmly to the drainage pipe.



3. Fit the TT-S (Transparent tube-Short) to the reservoir lid.



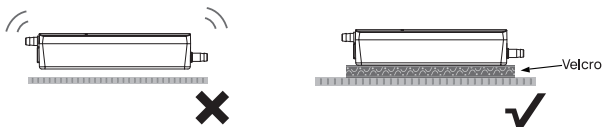
4. Install pump drive unit above the ceiling where possible. (A) - hidden out of sight, but still accessible for maintenance. Alternative options: inside conduit (B) or inside the evaporator (C) if ceiling space is not available.



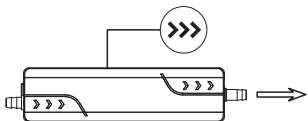
1	False ceiling
2	Evaporator coil
3	Condensate drain tray
4	Transparent tube
5	Conduit

Condensate pump

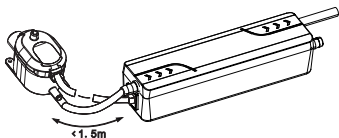
5. Use the shockproof Velcro strap to secure the pump firmly, reducing vibration and noise.



6. Ensure the water flow follows the correct direction (see diagram below).



7. Connect the reservoir and pump with the TT-L (Transparent tube-Long), secure with a tie, and ensure the pipe length is less than 1.5 m (see diagram below).



8. Connect a TT-L (Transparent tube-Long) to the outlet, secure with a tie, and ensure the discharge head is under 6 m and the pipe length is under 15m (see diagram below).

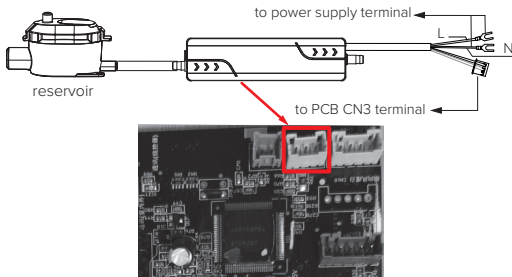


Condensate pump

9. Connect the power supply wiring and the signal line correctly to ensure protection against water leakage if the condensate pump fails under different operating conditions.

For Emerald VRF Wall-Hung Air Conditioners

Connect the signal line to the indoor PCB CN3 terminal as shown in the diagram.



For Other Air Conditioners

If the unit has a built-in liquid level switch → Follow the wiring method in Fig 1.

If no liquid level switch is available → Use a suitable AC contactor to control the air conditioner power (see Fig 2).

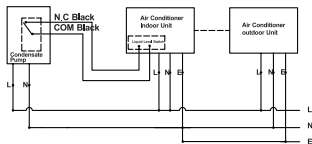


Fig 1

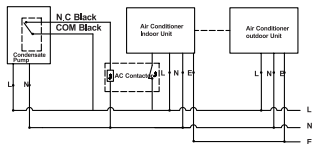


Fig 2

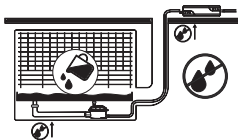
Power cord wiring: L (Live): Brown, N (Neutral): Blue, Signal line (NC, normally closed): Black, Signal line (COM, common): Black



Distinguish clearly between the power line and signal line. Incorrect wiring may damage the drain pump. Always ensure consistent voltage identification.

Condensate pump

10. Pour water into the drip tray to check for leaks and ensure the condensate pump operates normally.



8. Troubleshooting

Problem	Cause	Action
Pump runs all the time	1. Installation is not horizontal	Adjust the tank make it level
	2. There is sludge inside tank	Clean the inside of tank and float
Pump makes loud noise	1. The water is siphoning back in the pump	Check that the outlet pipe is not lower than the pump to avoid siphoning; if necessary, raise the condensate pump position.
Pump can't start working	1. Installation is not horizontal	Adjust the tank, check water level
	2. The power can't reach pump	Check power supply
	3. The voltage isn't correct	Check the voltage

9. Important service guide

Clean the reservoir, filter, and float at least every six months (recommended in spring and autumn) using a chemically compatible antibacterial wash. Ensure the float is replaced with the magnet facing upward before reassembly.



10. Warranty

This warranty covers all parts with material or manufacturing faults. The buyer's sole remedy is the repair or replacement of defective parts. Labour costs and any consequential damages are not covered. Returned units must be complete. We accept no liability for nonconforming installation or failure to follow specifications or maintenance recommendations.