

Owner's Manual

Air Cooling Installation Instructions



For Installation

Please get in touch with **Symphony MEPA**

For Warranty Claims

Please visit our secure website www.symphonylimited.com

Please keep this important manual in a safe place. It is the owner's responsibility to ensure that regular maintenance is carried out on this evaporative cooling product. Failure to do so will void all guarantees beyond statutory and legal requirements.

natural cooling

Symphony[®]

www.symphonylimited.com

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Introduction

General Information

Thank you for purchasing a quality Symphony Evaporative Cooler. We care about your safety and would ask you to spend a few minutes reading these simple instructions before operating this product.

Safety



Read carefully all these instructions prior to operating the unit.

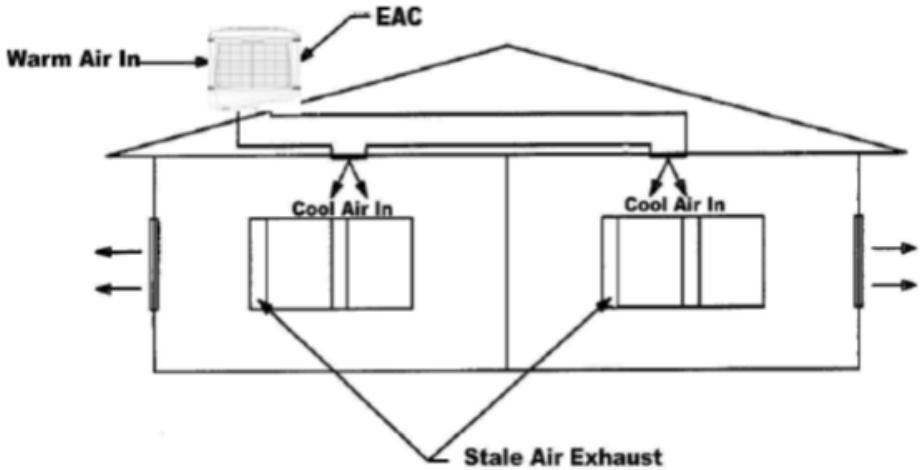
- Read and Save these Instructions. Do not throw these Instructions away.
- Interference with and operation of this cooler in any manner not prescribed by these instructions could cause a safety issue and WILL void any warranty.
- Do not use cooler on uneven or unstable surfaces.
- Electrical connections should only be performed by a qualified electrician to ensure that all wiring will
- confirm to your local standards.
- Use only with a 230V / 50V, 60Hz, 1 phase electrical supply.
- Motor and pump have a grounded, molded plug and an automatic thermal overload which will stop the motor operation if it overheats. The motor will restart again when it cools down.
- The molded pump receptacle is for the grounded evaporative cooler pump only. Do not plug anything
- else into this receptacle.
- Do not alter or modify this cooler.
- Do not allow children to operate or service this cooler.

WARNING:

- To reduce the risk of fire or electric shock, do not use this product with any solid state speed control device.
- Use only qualified electricians for replacement or servicing of switches, or electrical motors and components in this cooler.
- Always turn off power and unplug the fan motor and pump inside the cooler before installation or maintenance.

Evaporative Cooling

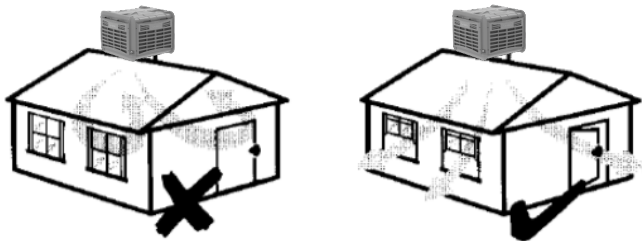
The principal of your unit is to introduce fresh air, which is washed through the filter pads to provide cool fresh air. The air is exhausted taking with it any heat loading on the home.



Exhaust

It is essential for successful operation of evaporative air-conditioning that there are enough exhaust openings in the area to be ventilated. Open doors and windows will usually provide this.

The minimum exhaust opening should be 10 ft² for the 5,000-cfm unit and 14 ft² for the 7,000 cfm unit.



Vent Area for Doors and Windows



5½ ft²



16 ft²



8 ft²



5½ ft²

FAILURE TO COMPLY WITH THESE INSTRUCTIONS:

If this product is installed in a manner which is inconsistent with these installation instructions or, if the product has been modified and or altered from its original form, we shall not be held in any way liable to the purchaser of the product or any other person in connection with any loss or damage that have may have been, or may in the future be, suffered or incurred as a result of such incorrect installation or modification or alteration of the product. Should you not follow these instructions the unit warranty may be void. The cost of warranty would then be a cost to the customer or the installer / dealer. Refer to the tick box Commissioning Checklist to ensure you have covered all points when the installation is complete.

1.1 Important Notes

- **TEXT AND ILLUSTRATION COPYRIGHT SYMPHONY LIMITED LTD.**
- All rights reserved. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system, without prior permission in writing from Symphony limited.
- Symphony limited is constantly researching and developing improved product features and therefore reserves the right to change the specifications without notice. E. & O.E.

1.2 Before Commencing

- Packaging – check there is no damage before removing packaging. Damaged units should not be installed. Symphony customer care line should be contacted prior to installation. Careless transportation by installer will not be covered by warranty.
- Do not install damaged products. Contact the Symphony customer care line for further advice.
- Installed damaged products will not be covered by warranty.
- Have you got all the system components?
- Have you got the right unit?
- Does the system design conform to the minimum specification of the sizing?
- specification and as such fall in line with sound engineering design practices?

Unit location

2.1 Unit Location Check List

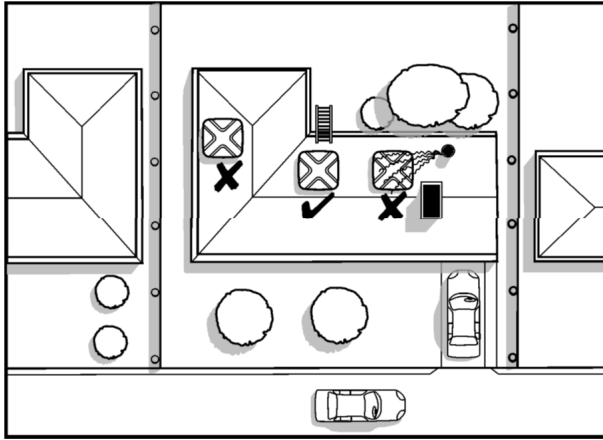
·EPA - A correctly installed unit will perform to specification on sound pressure radiated noise. As an installer, you have a professional obligation to ensure that every practical and reasonable effort is made to install this product to best practice guidelines and ensure that any operational noise does not affect neighbors. Complying with EPA / council by laws for noise abatement is the responsibility of the dealer / installer / owner.

NOTE: Do not mount the unit on a section of roof that slopes towards a neighbor's property.

- Place the unit well away from sources of smoke, dust and objectionable fumes so that only clean, fresh outside air will be drawn into the unit. Reference should be made to relevant electric codes and state plumbing regulations.
- Check the proposed location to ensure that building members are structurally capable of supporting the operating weight of the air conditioner. You may need to consult the roof truss manufacturer.
- The unit must be installed in a position that gives safe access for service. It is the responsibility of the dealer / installer to ensure safe access to the unit can be obtained for servicing the product.
- Where roof height, pitch or construction will cause OH&S concerns as previously mentioned, service footing supports / platform and or harness anchorage must be provided for safe service.

NOTE: The manufacturer and its service providers reserve the right to refuse service unless safety and accessibility to the unit can be guaranteed.

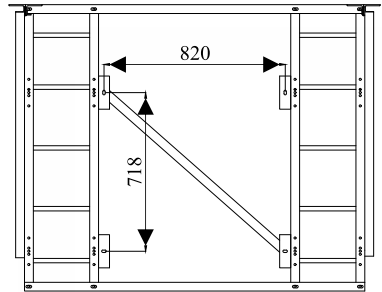
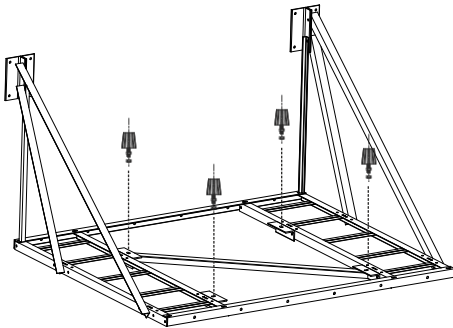
- The providing of any extra equipment required to give access to the unit for servicing or warranty repairs are the responsibility of the owner.



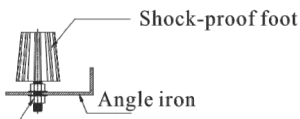
The unit should face into the customer's back yard, as low as possible on the roof, with easy, unobstructed access. Keep the unit away from chimneys, flues and vents that will pollute the filter pads and the fresh air being drawn into the house.

Unit installation

The diagram of the bottom frame and the shock-proof foot



Venti-Cool 20U/25SU Mounting stand



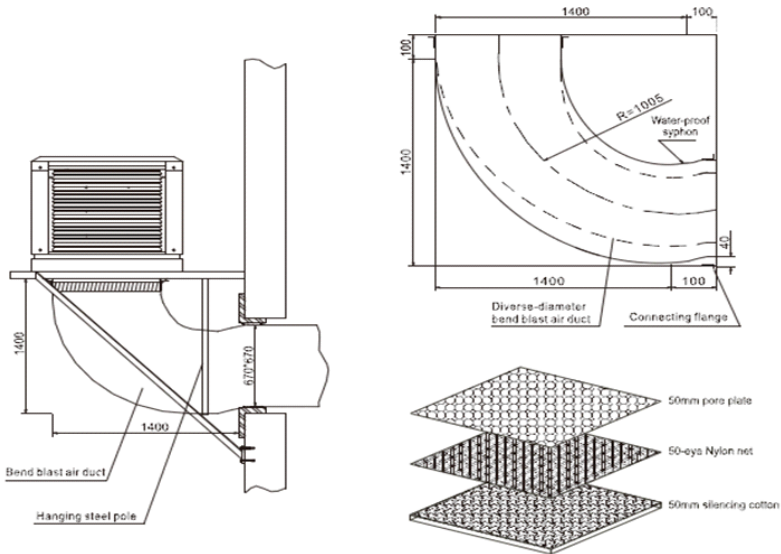
M10 screw $\Phi 10$ flat putting
(both up and down sides)

Shock-proof installation

- Plastic chassis use shock-proof foot, adjust the horizontal position of the unit by the angle iron's M10 screw.
- The center distance of the shock-proof foot must be correct, in order to avoid the deformation of the unit's chassis.

Unit installation

Specification diagram of the air duct



The diagram of the Silencing cotton installation

Remarks:

1. To ensure the minimal venting resistance, the curvature radius of the air duct from main unit should be 1.5 times of the air duct diameter. Use the material in the 1500°1500 steel sheet. The indoor air duct's curvature radius should be 1.5 times of whole air duct. To reach the best venting effect as comply with this method.
2. Under the principle of wind power concentrating on about three meters area of air duct and the wind power and wind pressure forming the airflow to impact the air duct and resulting in the noise, should make silencing measure that paste silencing cotton or fireproof sponge on the internal surface on the two to three meters forepart of the connecting inside air duct to increase the silencing acreage and to get rid of the prime mover of wind pressure swashing the air duet. Otherwise, to install the silencing cotton in the out-side air duet as the common installing procedure.

Basic principle

Evaporative air cooler units is a high-tech product, introduced from Europe and American. Its basic principle is as follows: Water evaporation brings away the surrounding heat and causes the temperature to become low. Its working principle is that negative pressure occurs because of wind draining by exhaust fan. Air goes through the cooling pad and the water pump transmits water to the pipes of cooling pad at the same time. The water nourishes the touching surface evenly and the cooling pad angel makes water flow evenly to the side of wind inlet, absorbing amount of the heat from air, which cool the air in cooling pad and makes the wind cool, wet and fresh. The unevaporated water falls into the bottom, forming the water cycle. There is a water inductor in the bottom, so when the water falls to certain level, inlet valve will open automatically to add water; when water reaches the appointed level, the valve will close automatically.

Application

Manufacturing: textile, machinery, ceramic, refine chemical industry, metallurgy, glass, hardware and leather factories:

Processing: plating, electronic, shoe making, painting, plastic, clothes making, food package etc. Others: golf center, baking place, playground, hospital, waiting room, school, supermarket, washing room, kitchen, vegetable market, entertainment center, underground parking lot, park, greenhouse, poultry farms, garden, and places where air conditioning and ventilation fan has been installed but cooling is not enough.



Venti-Cool 20U

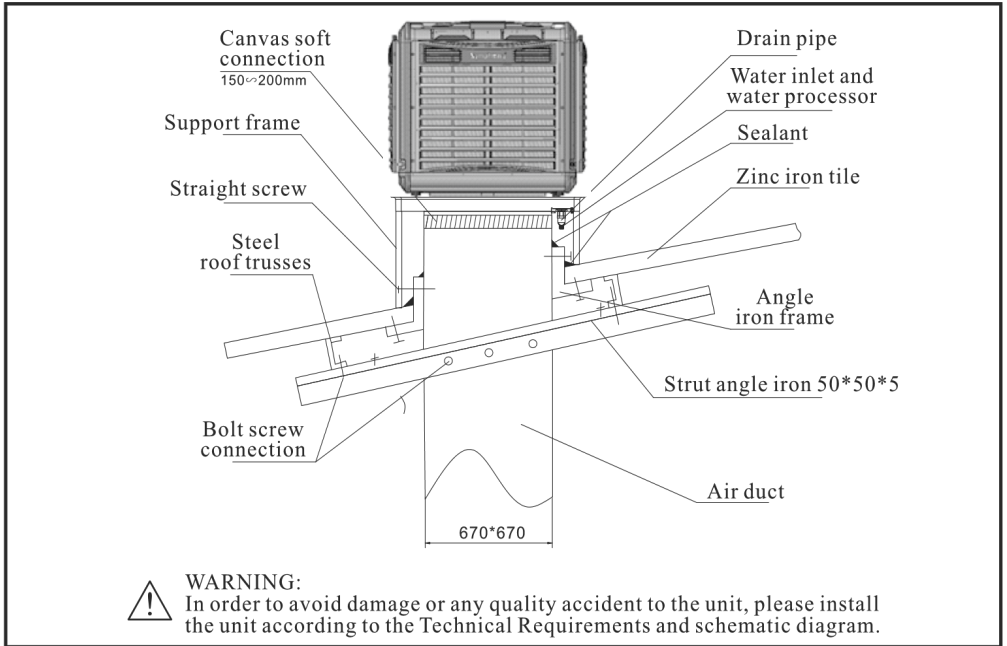


Venti-Cool 22S



Venti-Cool 25U

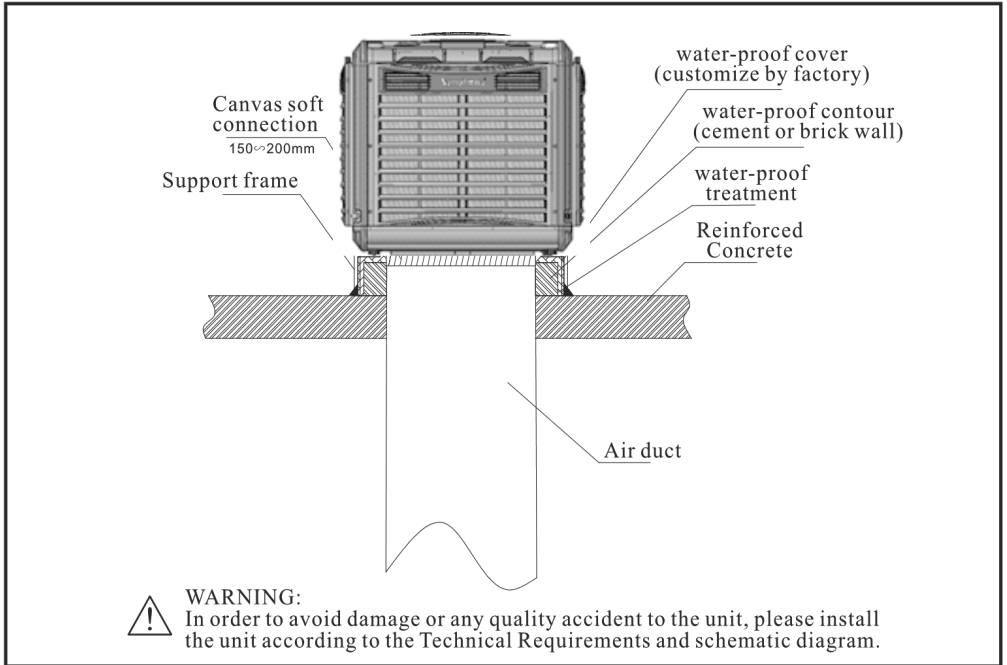
The installation illustration of the unit on zinc iron tile roof



Technical Requirements

1. The intensity of the roof trusses should support the weight of the unit and the maintenance personnel.
2. The open size of the roof should not be bigger than the air duct installation size of 20mm. (As the picture shown)
3. Unit installation should comply with the standard of GB50275-98, the deviation of the level should not be bigger than 1-1000.
4. All the openings must do the water-proof treatment.
5. The four sides of the unit must be fastened by support frame.

The installation illustration of the unit on cement roof



Technical Requirements

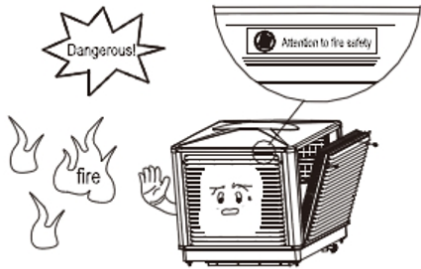
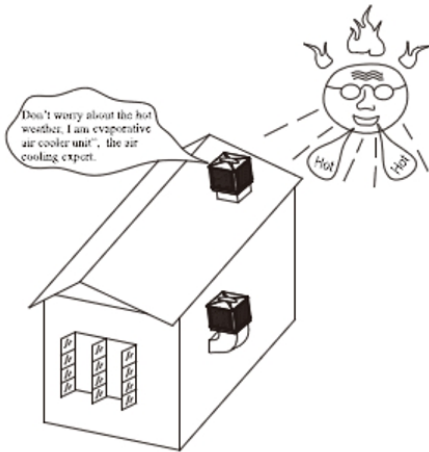
1. Use 40*40*4 angle iron connect with reinforced concrete.
2. The intensity of the roof trusses should support the weight of the unit and the maintenance personnel.
3. The open size of the roof should not be bigger than air duct installation size of 20mm. (As the picture shown).
4. Unit installation should comply with the standard of GB50275-98, the deviation of the level should not be bigger than 1/1000.
5. All air duct must do the water-proof treatment.
6. The four sides of the unit must be fastened by support frame.

Cautions

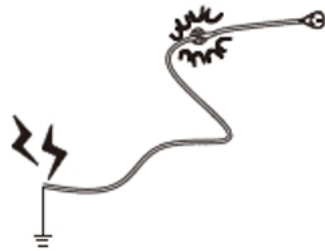
Before operating the unit, please read the following instructions carefully

Running the unit correctly under the following items:

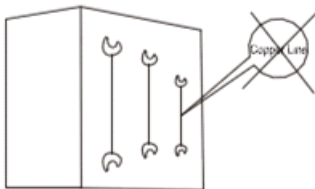
- a) Environmental temperature : 18-45°C.
- b) Environmental relative humidity: ≤85%.
- c) Atmospheric pressure: 8610A-106KPA.
- d) The supplied water should be soft water, water temperature ≤45°C. water supply pressure: 0.15- 0.6Mpa.
- e) Voltage tolerance +-5%.
- f) Environmental Air quality should be no less than 6133096 third grade (Including).
- g) Corrosion-free environment.



Keep far away from fire during transportation, installation and operation.



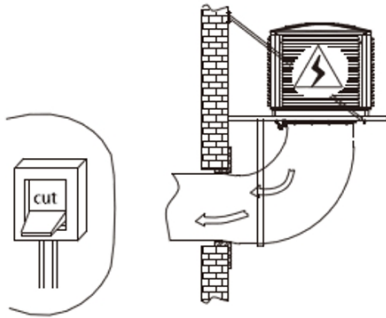
The wiring should be connected correctly and kept solid, keep away from mouse biting and overweight pushing, stretching, or changing of power cord and control wire. **Power cord should be changed by the manufacturer or qualified personnel if there is damage.**



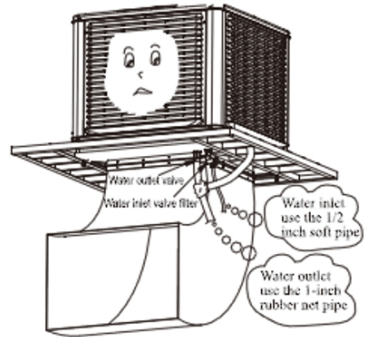
Don't use the incorrect fuse ore other metal fuse, it might cause fire.



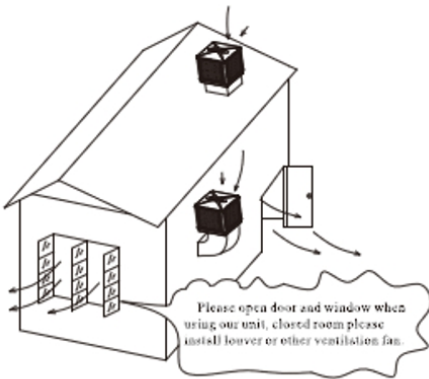
Grounding: Must be touched to ground! Grounding wire must be connected with the specially grounding board device of the building!



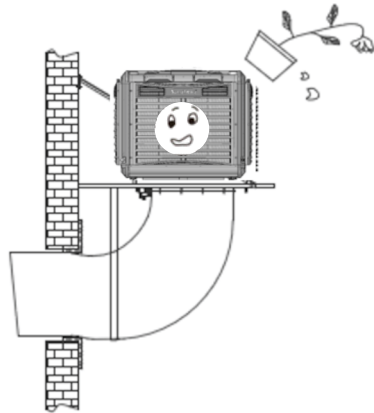
Don't open or repair the unit when it is working. make sure power supply is off before repair and maintenance .



Please Immure the water inlet pipe and the water maid pipe both in good connection ,water leakage will cause damage.



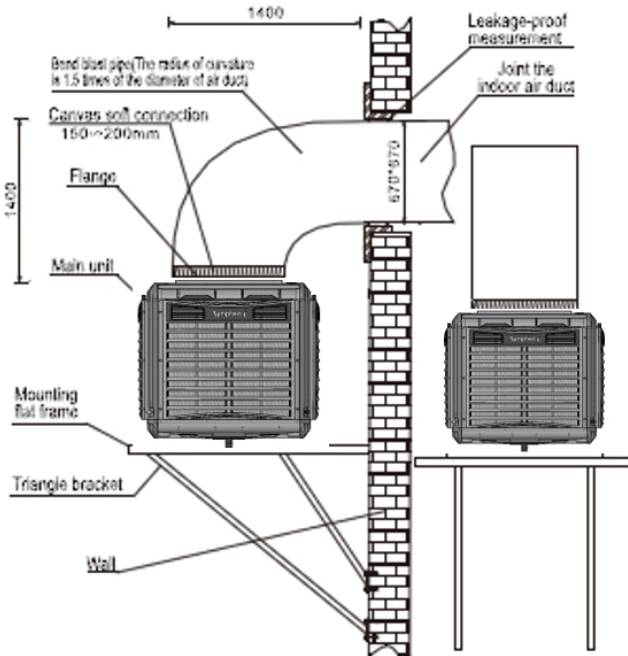
To ensure the best efficiency of our unit, please keep enough door and window open.



Don't stand or sit on the unit or put other things on it, it might cause damage.

Installation diagram of the unit

Installation diagram of wall-type Top wind outlet



WARNING:

In order to avoid damage or any quality accident to the unit, please install the unit according to the Technical Requirements and schematic diagram.

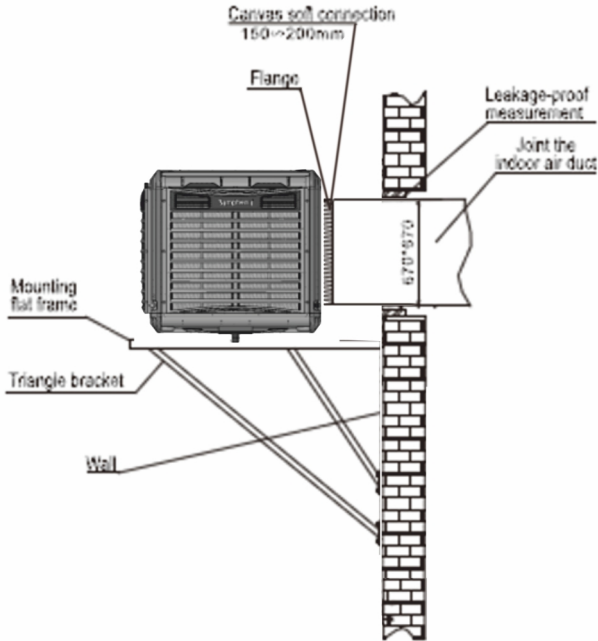
Use the 40*40*4 angle iron connect with the wall or the window's bolt screw put the rubber between air duct and angle iron frame for shock-proof and seal all the apertures with glass cement or cement. The bend blast pipe must be done according to the drawing, sectional area of the uptake be no less than 0.45 square meter.

Technical Requirements

1. The welding and installation of the triangle bracket must be solid.
2. The mounting haute should support the weight of the unit and the maintenance personnel.
3. Unit installation should comply with the standard of G850275-98 ,the deviation of the level should not bigger than 1/1000.
4. All air duct must do the water-proof treatment.
5. The junction box of the unit must be fixed near to the wall for repairing conveniently.
6. Must make the water-proof syphon on bend blast pip: which the part near the wall, to prevent water flowing into the room.

Installation diagram of the unit

Installation diagram of wall-type Side wind outlet



WARNING:

In order to avoid damage or any quality accident to the unit, please install the unit according to the Technical Requirements and schematic diagram.

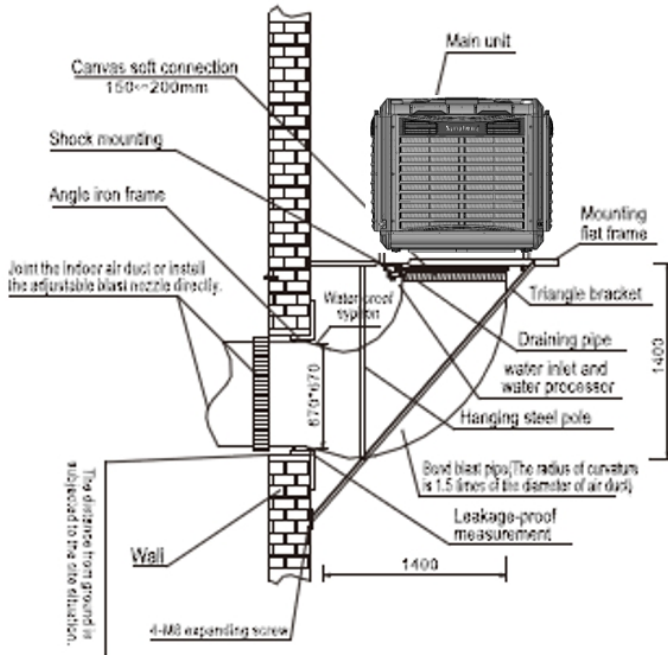
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Technical Requirements

1. The welding and installation of the triangle bracket must be solid.
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4. All air duct must do the water-proof treatment.
5. The junction box of the unit must be fixed near to the wall for repairing conveniently.
6. Must make the water-proof syphon on bend blast pip: which the part near the wall, to prevent water flowing into the room.

Installation diagram of the unit

Installation diagram of wall-type Bottom wind outlet



WARNING:

In order to avoid damage or any quality accident to the unit, please install the unit according to the Technical Requirements and schematic diagram.

Use the 40*40*4 angle iron connect with the wall or the window's bolt screw, put the rubber between air duct and angle iron frame for shock-proof., and seal all the apertures with glass cement or cement. The bend blast pipe must be done according to the drawing, sectional area of the uptake be no less than 0.45 square meter. Install the hanging steel when fixing the air duct, it could hanging all weight of the air duct on the mounting frame.

Technical Requirements

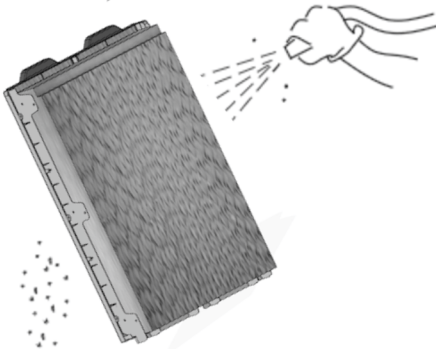
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4. All air duct must do the water-proof treatment.
5. The junction box unite unit must be fixed near to the wall for repairing conveniently.
6. Must make the water-proof syphon on bend blast pipe which the part near the wall, to prevent water flowing into the room.

Product Basic Information

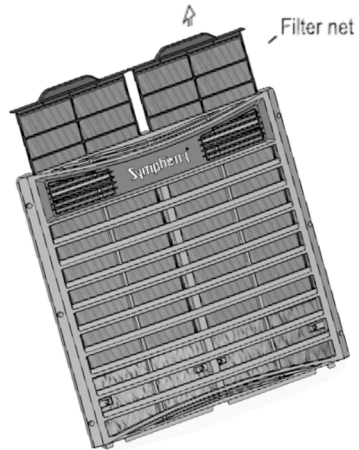
Product name	Air Discharge	Max Airflow (CMH)	Power Consumption (kw)	Power source	Air outlet size (mm)	Tank capacity (ltr) (up to brim)
Venti-Cool 20U	Top/Bottom	20,000	1.1	230V/50Hz, 1 Ph	670 x 670	40 / 70
Venti-Cool 22S	Side	22,000	1.1	230V/50Hz, 1 Ph	670 x 670	40 / 70
Venti-Cool 25U	Top/Bottom	25,000	1.5	380V/50Hz, 3 Ph	670 x 670	40 / 70

Cleaning of cooling pad

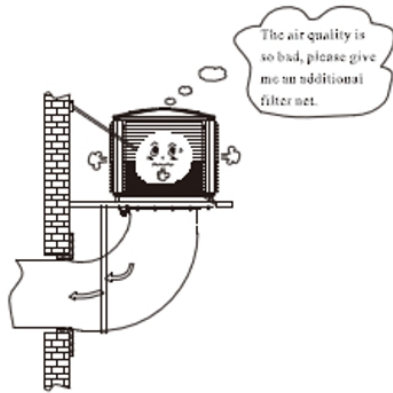
Clean the cooling pad with water from inside to outside



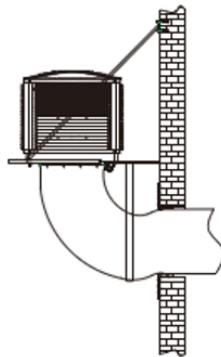
Attention:
Do not use water with high pressure, any acid or alkaline detergent is forbidden.



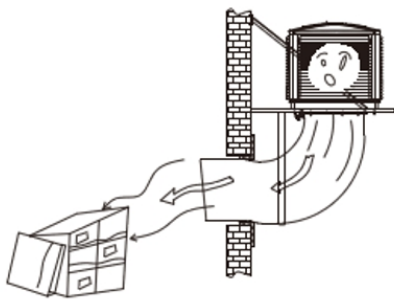
clean the filter net from time to time



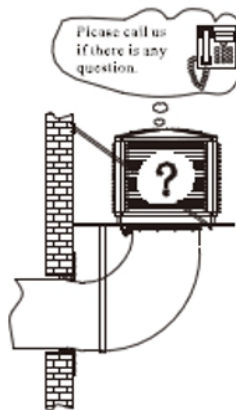
To ensure the cooling efficiency, the filter net could be considered installing for protecting the unit.



After few year's operation. check the installation from tune to time to make sure the installation is solid. Any security risks should he informed to the professional



If using the unit in the place where strict humidity and temperature needed, please install the unit under the guidance of professional personnel.



Any abnormality occurred during operation, please stop using immediately and inform manufacturer or distributor,

Disclaimer

We reserve the right to make alteration to specification, quantities, dimension etc., for production or other reasons, subsequent to publication.

The information contained here in has been prepared by qualified expert of the factory.

While we believe the information is accurate and completed, we make no warranty or representation for any particular purposes. The information is offered in good faith and with the understanding that any use of the units or accessories in branch of the direction and warning in this document is at the sole discretion and risk of the user.

Preface

thanks for selection our product, each of our product is manufactured to ensure the safety and reliability.

To heil of you get basic understanding and proper operation knowledge for the product, please read manual carefully before the first use of product and well keep it for future reference.

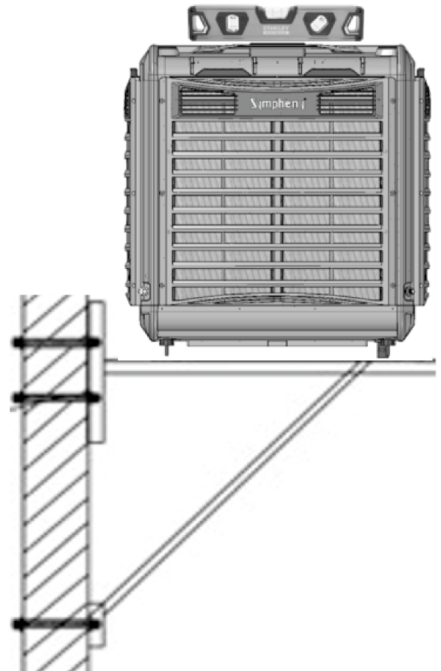
Safety instructions

Installation

Ensure the cooler is level
Adjust the mounting legs if necessary

Turn the water on to the unit and allow the unit to fill.

- Check water fittings do not leak
- Ensure float valve operates.
- Fit the louvre panels and check for even wetting of the filter pads
- Check bleed off rate.



Check List

Use this list to check the installation.

Unit

- All equipment ordered by the customer is installed.
- The unit is level and secure.
- The water supply line has been flushed to clear swarf and debris and is free of leaks.
- The tank is free of foreign matter and debris. The water isolating tap is turned ON.
- Water drainpipe work is completed and sealed.
- The fan assembly is correctly located, and the fan blade spins freely in the venturi.
- The mains and control wiring are complete, and the circuit breaker is turned ON.
- The water basin fills with water and the float valve closes correctly when the water level is below the overflow level.
- The water pump operates correctly when turned ON at the controller.
- Bleed rate is set to suit local water conditions.
- The fan operates through the entire speed range.
- Water distribution is even with the filter pads fitted and the air conditioner operating pump and fan.
- All Controller functions for the appliance operate

Ductwork and general

- All roof penetrations are fully sealed and watertight.
- All ductwork is completed to plan, correctly supported and airtight, with no bend tighter than 1.5 x the ductwork diameter.
- Air distribution checked, dampers are adjusted, and all outlets correctly adjusted and wiped clean.
- Man, hole cover replaced.

Problem solving

PROBLEM	PROBABLE CAUSE	REMEDY
Unit fails to start	<ul style="list-style-type: none"> a. Power Failure b. Tripped Circuit Breaker c. Blown Fuse d. Electrical Fault in cooler 	<ul style="list-style-type: none"> a. Wait for power to be turned on. b. Reset circuit breaker c. Replace d. Call Symphony Care Line
Filter Pads not wetting.	<ul style="list-style-type: none"> a.Pump Seized b.Electrical fault with pump 	<ul style="list-style-type: none"> a.Extension cord dropping voltage b.Maintenance page. See Pump section. c.Adjust restrictor d.Call Symphony Care Line
Filter pads too wet	<ul style="list-style-type: none"> a. No water restrictor b. Electrical fault with pump c. Needs smaller restrictor d. High voltage in your area 	<ul style="list-style-type: none"> a.Maintenance page. See Pump section. b.Adjust restrictor c.Call Symphony Care Line
Water leaking from overflow	<ul style="list-style-type: none"> a. Float Valve Leaking b. Drain from Pads 	<ul style="list-style-type: none"> a.Adjust or replace float valve if necessary b. Normal Operation – adjust that level
Water Droplets in air stream	<ul style="list-style-type: none"> a. Loose Delivery Tube b. Break in tubing c. Pump appears to deliver excessive water to pads d. Bleed nozzle is blocked 	<ul style="list-style-type: none"> a. Check and tighten b. Replace as necessary c. Check the condition of the filter pad. Wash if pad shows heavy build-up of minerals d. Clean bleed nozzle
Excessive humidity	<ul style="list-style-type: none"> a.Not enough air flow Inadequate Exhaust 	<ul style="list-style-type: none"> a Increase fan speed b. Provide more open area to exhaust stale air by opening windows and doors in adjacent rooms.
inadequate Cooling	<ul style="list-style-type: none"> a. Dirty Filters b. Dry Filters 	<ul style="list-style-type: none"> a. Clean b. Check control set on COOL mode. Check water delivery system. Adjust if necessary.
Unpleasant Odor	<ul style="list-style-type: none"> a. Unit located near odor source b. Algae in water tank 	<ul style="list-style-type: none"> a. Remove source b. Clean tank and refill with fresh water.
Rapid formation of white deposits on pads	<ul style="list-style-type: none"> a. Insufficient bleed rate b. High mineral content in water supply 	<ul style="list-style-type: none"> a. Bleed off should be checked to see if bleed nozzle is blocked, clear if necessary and clean pad. b. Increase the bleed rate. More regular maintenance may be required

Maintenance

Spring Start-up

- **Clean pump.** Clean the pump once a year at start up. Check the pump spout for blockage. Ensure the impellor / shaft turn easily. If any hose connections have been removed during the pump cleaning process, make sure that hoses and clamps are reconnected.
- **Check pads.** Check if the pads need to be replaced or washed
- **Check bleed off valve.** Check bleed off valve to ensure it is not blocked.

Winter Shutdown

- **Drain water.** If the cooler is not going to be used for an extended time the water should be drained from the cooler and connected water lines.
- **Cover unit.** Fit a cover to protect the unit when not in use for an extended time.

WARRANTY REGISTRATION CARD

Product Sr. No.

Date of Purchase ___/___/_____

Model : _____

Name : _____

Address : _____

E-mail : _____

Mobile : _____ Phone : _____

Condition of warranty

We extend this limited warranty to the original buyer (first retail purchaser) and warranty that the product shall be free from manufacturer defects in workmanship and materials for 12 months from the date of purchase. a. Warranty will come in with effect when the following conditions are met with: a) Warranty registration card duly filled and received by the company within 10 days from the date of purchase. b) Product is operated following the recommendations explained inside the user manual. b. The company's liability under the warranty will be limited only to motor, pump, lover motor, remote, PCB and also restricted to any such defect which occurs under conditions of normal operations and under proper use. Any part/s replaced by the company at its discretion shall be a functionally operative unit. c. This warranty shall not apply to product: 1) Which have not been purchased from authorized distributor through their network or company's authorized retail stores, 2) Which have been altered/opened by any other personnel not authorized by the company, 3) Incorrectly used in combination with any other substance or products, 4) Which are used for commercial rental purpose and / or which develops problems due to faulty care or maintenance and alterations to product or its parts. 5) Which is subjected to electrical supply for which the product is not designed, 6) Warranty will void if the product is operated with a sub-standard inverter or non-sine wave inverter. 7) If documentation of buying is not available to validate an original purchase. d. While the company will make every effort to carry out the repairs at the earliest, it however is made expressly clear that the company is under no obligation to do so in a specified period of time. e. This warranty shall automatically terminated on expiry of the warranty period of 12 months from the date of purchase even if the product may not be used for any time during the warranty period for any reason whatsoever. f. Cooling pads and outer plastic parts are not covered under warranty. g. The company shall not be liable in any case for any loss or damage caused to any property, death or disability caused to any human life arising out of fire, electrical fault, short circuit, accidental handling or any kind of natural calamity. As, such the company's liability is limited to the cost of the spare parts of the said products only. h. Change of address of the customers must be intimated to the company without which the warranty shall not be operational. i. Due to ongoing research and development, the company holds the rights to modify the product without any prior notice or obligation to buyers. j. Purchaser should retain the purchase bill as evidence of the date of purchase. Copy of the purchase invoice should be given to the visiting service technician while attending the complaint. In case of any alteration in the date of purchase invoice is found without sign and seal of the dealer, the warranty shall be void. k. During the warranty, customer is not entitled for exchange of product or refund money. l. The company does not have any Annual Maintenance Contract (AMC) policy. m. The court/Consumer forums only at Ahmedabad, Gujarat, India shall have exclusive jurisdiction for any disputes arising out of this sale/transaction. n. Service for this product shall be provided by Authorized Service Provider. You may register warranty by log on to www.symphonylimited.com/warranty or you may send SMS <sym, name, city, pin code, serial number> to 9510180111. Warranty will be applicable if registered within 15 days of purchase. o The above warranty conditions shall be applicable for domestic service only to the sales in the domestic markets of India only, excluding Northern Eastern states, Andaman and Lakshadweep. For overseas market the warranty will be given by the local distributor of the respective country. P. To register service request Please use either of the following ways to register your request.

1. You may call on our all India help line No. 09510070111 or 07930130111.

2. You may log in through our website "www.symphonylimited.com/service".

Symphony Limited

Symphony House, FP12-TP50 Bodakdev,
Off SG Highway, Ahmedabad 380054, India.
E-mail : services@symphonylimited.com

Dealer's name
& signature

Service Review

A qualified service technician should conduct any service work carried out on this ducted Evaporative cooling product. It is important that periodical service is carried out on the product to ensure the customer receives the efficiency benefits the product provides.

Only an authorized Symphony limited service provider can carry out warranty service.

**For Installation
Please get in touch with Symphony MEPA**

**For Warranty Claims
Please visit our secure website www.symphonylimited.com**

Symphony Limited

Symphony House, FP12-TP50 Bodakdev, Off SG Highway, Ahmedabad 380054, India.
E-mail : services@symphonylimited.com

natural cooling

Symphony®

www.symphonylimited.com