KEES, INC.

Products for Food Service & Sheet Metal Industry

400 S. INDUSTRIAL DRIVE - P.O. BOX 327 - ELKHART LAKE, WISCONSIN 53020 - (920) 876-3391 - FAX (920) 876-3065

Evaporative Cooling Module Instructions

Application Recommendations:

1. Piping should be in accordance with acceptable industry standards.

2. Ensure that the Evaporative Cooling Module is installed level, with proper support rails under the unit and with clearance to the bottom drain connections. The Evaporative Cooling Module should not be installed over any roof opening, roof penetration or roof curb to prevent any excess water from spilling over into the building proper.

3. Install primary and secondary drain connections with properly sized traps (sufficient differential to overcome the system negative). Primary drain connection is factory installed in the base of the evaporative sump section complete with stand-pipe. A secondary drain is also required if an Auto-Fill & Drain System is provided. The secondary drain connection must be field supplied and installed in the lowest section of the drain pan to accommodate a two position drain valve. Drains may run from the unit to any convenient disposal location such as onto the ground, into the sewer, or into a condensate return from an evaporate section.

4. A bleed-off system is provided. Its purpose is to replace a small quantity of re-circulated water with fresh water to reduce scale build-up on the media pads. **The bleed line must be routed through the stand pipe opening.** Initially set the bleed-off rate to give 15 to 18 fl. oz. per minute. Adjust the rate accordingly based on the water hardness and the mineral build-up on the pad surface.

5. Evaporative coolers are designed to operate when ambient temperatures are hot. When ambient temperatures drop below 40 to 45 degrees then consideration needs to be given to either automatically or manually remove the water from the sump, drain, and water fill lines to prevent freezing and damage to the cooler.

6. Install a copper tubing water line from the domestic water supply to the water line shut off valve on the Evaporative Cooling Module. The copper line, water shut off valve, water pressure regulator (required if inlet pressure is above 50 psi, set at 40-50 psi) are to be supplied by the contractor and should meet local plumbing codes. Strainers should be provided on units using ground water. Softened or treated water is not recommended due to the wide variety of treatments. Care should be taken not to dissolve the resins in the media or let salt deposits build up.

7. Final connection from the shut off valve to the water float assembly should be made with plastic tubing.

8. Water adjustments on this re-circulating system consists of the following steps:

    a. Turn water supply “on”. Check for good pressure and flow through the float valve.

    b. Before the unit is started, adjust the float so that the water is 1 to 1-½” below the top of the overflow (1” on the larger units and 1-½” on the smaller units).

c. Water flow to the pad is preset at the factory. If more water is needed for your particular situation, back off the screw on the water flow clamp. An even flow from the top to the bottom of the pad using the least amount of water is all that is needed to assure maximum efficiency and life span.

d. Adjust the bleed to ½ turn open. If mineral deposits show on the pad surface after 30 days then increase the bleed rate.

Maintenance Instructions:

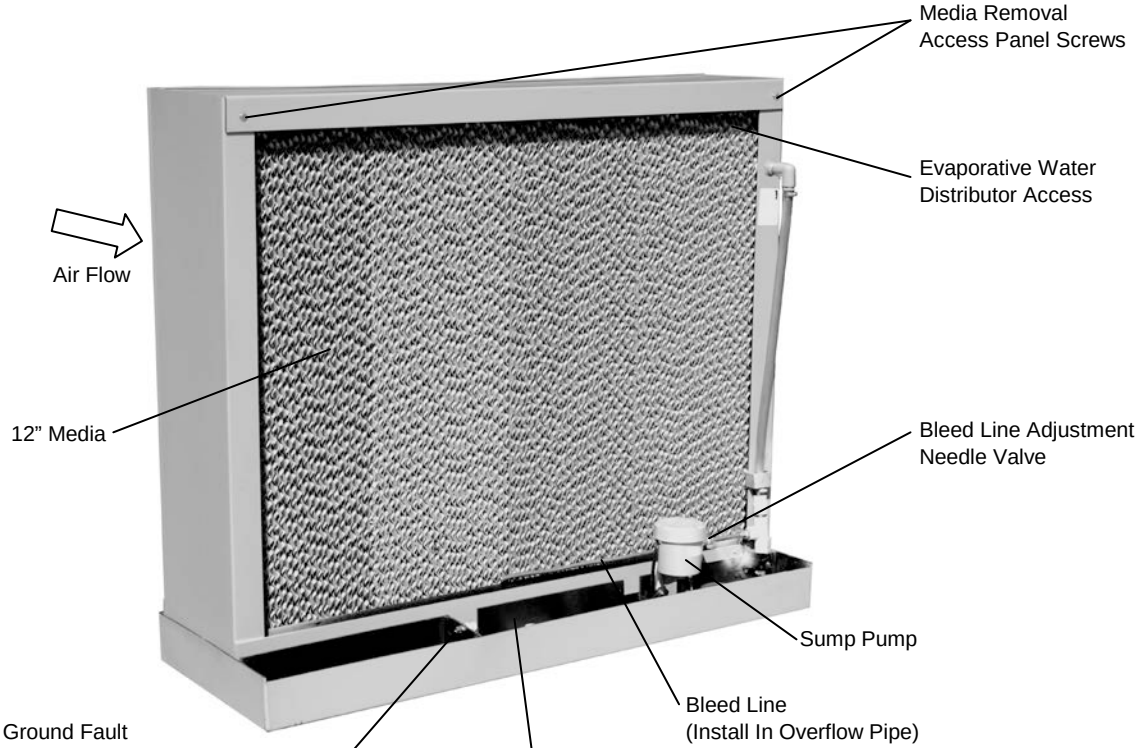
1. Media maintenance requires minimizing the mineral deposit build-up. Increase the bleed rate if build up occurs.

2. Annually perform a visual inspection of the water distribution hose for restrictions. Wash down the media with fresh water to flush out any accumulated matter. Do not use any high pressure washers or high pressure water to clean the media. It may harm or cause premature failure of the evaporative media.

3. If the contaminants can not be removed in this manner then replace the media. The use of any scale remover is not recommended. Also replace the media if it loses its structural integrity.

4. Winterization is necessary if the operating temperatures drop below 50 degrees F. Shut off the water to the system. Drain the water system and sump. Remove the media if ice or snowstorms are anticipated to prevent damage to the media caused by freezing and thawing.

5. Media can be removed through the filter section. First, remove the filters, then unscrew the filter support rails and remove the rails from the filter section. Next, remove the two screws from the access panel at the top of the evaporative cooling module. Finally, tip the evaporative media towards the filter section and remove it from the filter section.



NOTES:
115 Volt Ground Fault
Electrical Plug Connection
For Pump
In Evaporative Section