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www.rapidengineering.com

START-UP FORM: EVAPORATIVE COOLER

Customer:		Date:	
Technician:		Model Number:	
Start-Up Co.:		Serial Number:	

Field start-up should be performed by a qualified technician. The technician is responsible for assuring that all of the items on this checklist are properly installed and operating. Upon completion, a copy of this form should be returned to Rapid Engineering LLC , using the contact information listed in the header.

⚠ WARNING

Falling Hazard

Use proper safety equipment and practices to avoid falling.

Do not use any part of equipment as support.

Failure to follow these instructions can result in death, injury or property damage.

⚠ DANGER

Electrical Shock Hazard

Disconnect electric before service.

More than one disconnect switch may be required to disconnect electric from equipment

Equipment must be properly grounded.

Failure to follow these instructions can result in death or electrical shock.

⚠WARNING

Cut/Pinch Hazard

Wear protective gear during installation, operation and service.

Edges are sharp.

Failure to follow these instructions can result in injury.

A. Piping

- ☐ Water supply piped to proper location on evaporative cooler.
- ☐ Fill valve solenoid (normally closed) installed in the water supply line inside the building.
- ☐ Water supply line drain solenoid (normally open) installed and piped to a drain inside the building.
- ☐ Sump overflow is piped to a drain.
- ☐ Sump drain is piped and the sump drain valve is installed.
- ☐ Trap installed in sump drain pipe per local code.

B. Electrical

- ☐ Electrical connections are made at junction box on air handler.
- ☐ Fill valve solenoid (normally closed) is wired properly.
- ☐ Water supply line drain solenoid (normally open) is wired properly.
- ☐ Sump drain ball valve is wired properly.

Installation Code and Annual Inspections: All installation and service of RAPID™ equipment must be performed by a contractor qualified in the installation and service of equipment sold and supplied by Rapid Engineering LLC and conform to all requirements set forth in the RAPID™ manuals andall applicable governmental authorities pertaining to the installation, service and operation of the equipment. To help facilitate optimum performance and safety, Rapid Engineering LLC recommends that a qualified contractor conduct, at a minimum, annual inspections of your RAPID™ equipment and perform service where necessary, using only replacement parts sold and supplied by Rapid Engineering LLC.

Further Information: Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through RAPID™ representatives. Please contact us for any further information you may require, including the Installation, Operation and Service Manual.

This product is not for residential use. This document is intended to assist licensed professionals in the exercise of their professional judgment.

Evaporative cooler pads should be used and maintained according to pad manufacturer's instructions. Pad life varies depending on a number of factors including maintenance and frequency of use , To help facilitate optimum performance and safety, Rapid Engineering LLC recommends that a qualified contractor conduct, at a minimum, annual inspections of your RAPID™ equipment and perform service where necessary.

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C. Basic Operation (Control Package #1- Items apply to all evaporative coolers.)

- ☐ Evap enable relay (located in main electrical panel) energizes evaporative cooler. The fill valve energizes and sump begins filling.
- ☐ The outside air freeze stat is set at 45°F.
- ☐ When the outside air is below the freeze stat setpoint, the stat opens and the sump drains.
- ☐ The water level is below the cardboard media support. The media should never sit in the water. Adjustment of the float may be required depending on how level the air handler was installed.
- ☐ Flow of water over the media is adjusted properly. Proper flow is achieved by adjusting (if needed) the water flow adjustment valve so that the media completely saturates without getting droplets of water projecting off media in direction of airflow. It may take up to 2 hours for the media to properly saturate. Final flow adjustments should be made then.
- ☐ Adjusted bleed-off rate to approximately 20% of the evaporation rate. Please refer to the Evaporative Cooler Maintenance Section of the Installation, Operation and Service Manual for further information.

D. Conductivity Control (Control Package #2)

A conductivity controller monitors the electrical conductance of the cooling water. If the conductivity of the cooling water exceeds the front panel setpoint, the controller activates a "blowdown" process. During this process, some of the highly conductive water is drained from the sump and fresh water is added to dilute the concentrated water. When the conductivity level falls below the setpoint, the controller shuts down the "blowdown" process. Refer to the calibration procedure in the Conductivity Controller Installation, Operation and Service Manual.

- ☐ Conductivity controls work properly. Operation can be simulated by depressing and holding the "simulator" button on the conductivity controller while the evaporative cooler is in operation. This will open the "blowdown" contact, de-energizing the timer and open the sump drain valve. When the "simulator" button is released, the "blowdown" contact closes. This energizes the time clock for five minutes. After five minutes, the drain valve closes.

E. Auto Flush Control (Control Package #3)

- ☐ Water supply line and flush valve solenoid (normally closed) are installed in the proper location at the top of the evaporative cooler. (See mechanical drawing #40085830.)
- ☐ Flush valve solenoid is wired properly.
- ☐ The time clock schedule is set to desired auto flush interval and length of auto flush.
- ☐ Auto flush circuit works properly. When time clock initiates auto flush sequence, the flush valve solenoid (normally closed) open and supplies fresh water over the media. At the same time, the pump motor de-energizes and the sump drain valve opens to drain sump.

F. Comments

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