

AQUA SAVER® WATER METERING SYSTEM - Option ECD1

General Description

The Aqua Saver System is a water metering device that automatically adjusts its wetting cycle based on changes in the ambient dry bulb temperature. The Aqua Saver water control device is available only on Reznor Evaporative Cooling Modules. It is ordered as Option ECD1.

The Aqua Saver System is designed to automatically adjust to ambient temperature changes and thus provides the right amount of water flow to the media, resulting in increased media life, significantly less maintenance and less operation costs.

At 80°F, the Aqua Saver System engages the solenoid valve for approximately two (2) minutes for each of the ten cam lobes, making a complete on/off cycle every six (6) minutes. As the ambient temperature increases, the “on” time automatically increases to compensate for the media’s ability to evaporate more water in less time. The amount of water to the pad can be adjusted in two ways. First, the actual water flow rate to the pad can be adjusted. Each Aqua Saver System comes complete with a flow valve to aid in regulating the correct flow of water to the media. Second, the timer can be adjusted to shorten or lengthen water flow time.

Water Flow

The water should flow from the top to the bottom of the pad in 30 to 45 seconds depending on the height of the pad. The water pressure to the Aqua Saver flow valve should be between 40 and 60 psi. If the pressure is below 40 psi the Aqua Saver System “on” time will have to be lengthened or the next larger valve size will be required. If the water pressure is over 60 psi, a pressure regulator is required. Consult your factory representative when water pressure is below 40 psi.

Maintenance

The Aqua Saver System requires little maintenance other than turning off the water supply and draining the unit at the end of the cooling season to prevent freeze damage to the valve body. The water line should be completely drained and the unit operated for about ten minutes. This allows the valve to open and close through at least two cycles. At the beginning of the cooling season, turn the supply water on to restart the system.

MOISTURE ELIMINATION PAD - Option ASA1

The moisture elimination pad is designed to prevent draw through of water into the blower cabinet. A moisture elimination pad may be used on any evaporative cooling module but is required on installations with over 600 FPM (FPM = CFM ÷ Sq. Ft. of Media Face -- see Technical Data on pages 2 or 4). On REC Sizes 40-90 and equivalent option applications (see Cross Reference Chart on page 6), the moisture elimination pad is factory installed. On REC Size 180 and equivalent option applications, the optional moisture elimination pad is shipped separately for field installation.

AUTOMATIC FILL AND DRAIN KIT - Option CT

The automatic fill and drain kit includes a three-way solenoid valve in the supply line and a two-way solenoid valve in the drain line. When there is a call for cooling, the supply valve will automatically provide water flow to the cooling module. Where the cooling requirement is met, the drain valve will automatically drain the water from the cooling module reservoir. The optional automatic fill and drain kit is shipped separately for field installation. It is designed for use with the standard float and pump waterflow system but may be used with the optional Aqua Saver® time and temperature control system.

WATER HAMMER ARRESTOR - Option ECB1

At some locations due to various water pressures and installation conditions, the closing of the solenoid valve in the Aqua Saver® system may cause the water supply line to bang abruptly. Installing the water hammer arrestor in the supply line will minimize this banging by providing a permanent air cushion to absorb the shock wave. The optional water hammer arrestor is shipped separately for field installation.