

# SPECIFICATION

## > CELLCOOL

### **MEDIA**

The evaporative media shall consist of a 12" cross-fluted pad of cellulose materials impregnated with insoluble salts, rigidifying saturates, and wetting agents, and provides at least 123 square feet of evaporative surface per cubic foot of media. Pads shall have less than 0.26 inches water column air pressure drop at 550 FPM face velocity when wet. The maximum specified air velocity without water carryover for new undamaged media shall be 750 FPM. Design shall be targeted for 500 FPM and maximum design specification will be 550 FPM.

### **MEDIA WATER DISTRIBUTION SYSTEM**

The water distribution plumbing and interconnections are to be schedule 40 PVC or copper tubing with solid brass fittings where applicable.

Water distribution over the pad sections is through 100% polyester cloth fiber hose and includes a half round PVC spray distribution cover over the entire media length. The water distribution system shall be easily accessible from outside of the unit. The polyester distribution hose shall have ten (10) perforations per foot. A water flow brass adjustment valve is to be supplied for each cell.

### **WET MEDIA HOUSING**

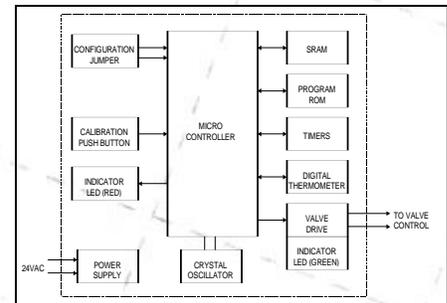
Media housing shall be constructed of, at a minimum, 3/16" thick, industrial grade, high impact ABS, corrosion proof, UV resistant extruded polymer. All exterior surfaces are to be painted with a UV resistant acrylic coating to increase protection from the sun. The bottoms of all media cases shall include a drain fitting, located as defined by application or installed by the end user.

### **REGULATED WATER SUPPLY SYSTEM**

The Microprocessor Regulated Water Supply System shall measure the ambient air temperature and use this information to open and close a 24-volt activated continuous duty solenoid valve using a predetermined time schedule. This solenoid valve will be normally closed to provide positive shut off when de-energized and allow for full flow when energized. The valve must withstand 180°F and 160 PSI operating pressures. This valve must then deliver water to the media water distribution system to provide maximum evaporation and minimum water usage. The system electronics shall consist of a crystal oscillator to provide a high frequency clock for the microprocessor as well as a high resolution time base for accurately controlling the on and off times of the valve drive electronics. A digital thermostat must

provide a 0.5°C (0.9°F) resolution for accurate temperature measurements. The system timers must use a divided - down crystal frequency and be programmed to provide interrupts to the microprocessor at a specific elapsed time or a regular time intervals. The microprocessor must communicate with the digital thermostat at regular time intervals and use the current and average temperature for accurately controlling the on and off times of the valve drive electronics. It must also interact with the user for testing and calibration and continually display status information.

### **BLOCK DIAGRAM**



### **SPECIFICATIONS**

#### **POWER SUPPLY INPUT**

24VAC - 60 Hz @ 40VA

#### **VALVE CONTROL OUTPUT**

24VAC - 60Hz @ 10VA

### **USER CONTROLS AND INDICATORS**

Configuration jumper for default time schedule selection.

Momentary push button for calibration control.

Red LED (Light Emitting Diode) indicates the status of the system.

Green LED glows when valve is open.