

Moisture Room Control Panel HM-630

INTRODUCTION

The HM-630 Moisture Room Control Panel is designed to maintain a constant temperature and humidity for concrete sample curing rooms. The panel consists of a temperature water mixing valve controlled by a digital controller and a thermocouple / sealed sensor. The control panel is mounted on a PVC backboard that is 30" long and 20" high. It is mounted on the wall outside the curing room with the sensor mounted on the wall about 4 ft. high inside the curing room.

The panel is designed to work as a **closed loop** system in conjunction with spray heads (1.5 gph) strategically placed in the curing room. Hot and cold water is fed into 1/2" connections at the bottom of the panel. The water is regulated and exits through a 1/2" discharge fitting at the top of the panel. This outlet is piped directly into the curing room and feeds a **closed loop** piping arrangement with the spray heads. The panel has a 3-prong cord that is designed to be plugged into a 120V/60Hz/15A GFCI protected outlet. The panel is governed by a normally closed solenoid valve and an on/off switch mounted on the front of the panel. There also is a manually controlled by-pass valve in the event of a power outage. The mixing valve also has a manual override if the valve must be adjusted in the event the AC power goes out.

The panel is designed to maintain a constant temperature at 100% humidity by the temperature controlled water running constantly into the curing room. Please refer to the Installation and Operating Instructions for a complete guide in proper installation and set-up of the Moisture Room Control Panel.

INSTALLATION & OPERATION

This Control Panel is designed and pre-assembled for easy installation. The unit must be installed on the outside of the moisture room, indoors, and protected from water.

1. Fasten the control panel to the outside wall of your moisture room near the door approximately four feet up from the floor and within five feet of a 120V/60Hz/15A GFCI outlet. Installation location should make the panel easily reachable and convenient to read the controls. Secure with large screws.



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2. Run the hot and cold water supply lines to the 1/2" pipe fittings at the bottom of the unit. The left one is the "Hot" and the right one is the "Cold".

NOTE: The SharkBite® Connection System Is to be used with COPPER or CPVC tubing ONLY!!

To Connect a Joint:

- Mark 7/8" down the tube.
- Push the tube firmly until it reaches the mark on tube.

To Disconnect a Joint:

- Push on the plastic release collar with a 5/8" open end wrench and pull.

3. Make an appropriate hole through wall, and run the 1/2" waterline up and into your spray head system inside moisture room. Spray heads should be rated approximately 1.5 gallon per hour each.
4. Mount the Temperature Sensor inside the moisture room approximately half way between the ceiling and the floor. Fill the hole with waterproof sealant. DO NOT extend the length of the sensor wire.

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5. After plumbing has been completed, turn on the Hot and Cold water and check for leaks.
 6. Now you can plug in the control panel into a GFI outlet. The switch on the 6 x 6 gray box will turn the unit on. The Controller will light up to let you know power is present. Use the arrow buttons to set Controller to the desired 73°F temperature. The word "OUT" will appear, this is normal. (SV = set value) Make adjustments to maintain temperature inside the room. Example: the set temperature may need to be set at 69°F to maintain 73°F inside the room. After each change, allow 24 hours for the room to stabilize.
- Remember, this panel must be mounted on the outside of a moisture room and indoors protected from water. Water splashed on electrical components will void any warranty. The Temperature Sensor is the only component designed to be inside the moisture room.
 - Any modifications or design changes without prior consent or approval from the designer voids the warranty.
 - Hot and Cold water supply must be available at or near the panel.
 - Minimum 40gal dedicated hot water tank.
 - Must have a floor drain in room.
 - 120V/60Hz/15A GFCI electrical outlet within 4 ft. of panel.
 - Minimum Water pressure of 40psi.
 - Tubing must be ½" copper or CPVC installed as a continuous loop.
 - 1.5gph Spray Heads at perimeter should be mounted at a 45° angle to the floor.
 - System Runs 24hrs/day, 7days/week.

NOTE: The by-pass ball valve (extreme left on panel) is normally closed. If a power failure occurs, or the electrical solenoid valve fails, the by-pass valve can be opened for manual operation to flow water to the spray heads. Also during a power failure, the Actuator can be used in a manual mode. Turn power off then insert a 3/16" Allen key into the top of the Actuator. Turn the Allen key to the desired position, valve position toward up is hotter, (counter clock wise) and valve position going down is toward a cooler setting (clock wise). The Temperature Controller, located at the far upper right of the panel is an approximate indication of the temperature. Adjust Controller up or down using a thermometer or temperature recorder from inside the room for precise measurements.

NOTE: *Interior of room must be waterproofed*****

NOTE: DO NOT DISCARD INSTRUCTIONS!