

## **PRECISION WATER SYSTEM - COMMANDbatch**

**Part Number: 42000**

### **DESCRIPTION:**

The Precision Water System is a combination of hardware and software that work together to ensure that the load characteristics (slump, workability, yield, etc.) are achieved with the batching process. Coupled with the powerful material target calculation functionality of COMMANDbatch, the Precision Water System can produce better concrete with less variability, and possibly lower cost.

The Precision Water System is comprised of a Moisture Interface Controller (MIC) inside a NEMA-approved junction box, a Command Alkon 7102 Moisture Probe for each bin, and the Precision Water System software application.

The software application runs as an extension of COMMANDbatch and simplifies the probe calibration process by leading the user step-by-step through the bake-out and calibration processes. Calibrations can be performed on readings from up to 12 moisture probes on a variety of materials, including coarse aggregates. Call Command Alkon Sales to discuss your application.

The MIC connects to the COMMANDbatch PC via an Ethernet cable while the moisture probe sensors are connected into the junction box. Calibrated moisture values are available as a calibrated, digital output count for each connected probe which is read by COMMANDbatch via the Ethernet connection.

The Ethernet connection allows the junction box to be mounted in close proximity to the physical probes, eliminating a significant amount of expensive six-conductor cable. (See the NOTE in the IMPLEMENTATION section for information about mounting the box outside the plant.)

### **OPERATION:**

#### **Automatic**

Once probes have been configured and calibrated, the Precision Water System operates without operator intervention, continuously converting the signal from the moisture probe into a digital value. The operator can review the moisture reading of each probe via the Precision Water System application or the batching system's plant graphics display.

#### **Manual**

Using the Precision Water System application, the user can configure and calibrate moisture probes, and diagnose problems.

### **SYSTEM REQUIREMENTS:**

- Windows PC with network support (for configuration and calibration.) COMMANDbatch PC can be used if already available.
- Moisture probe(s) and cable(s) are ordered and installed separately.
- COMMANDbatch version 1.7.8.0 or later.
- COMMANDbatch requires AAEON-C4 RTC or later.
- COMMANDbatch Eagle requires HSB668I CPU (CAI #25541) or later.

**IMPLEMENTATION:**

- Install the moisture probe(s) and cable(s).
- Install the junction box containing the MIC.

**NOTE:** The junction box that houses the MIC is not rated for outside use. If the junction box will be mounted outside, make sure to protect it from the elements.

- Connect power, the network connection, and the probes.
- From COMMANDbatch, start the Precision Water System software, obtain moisture samples and perform bake-outs to refine the calibrated “moisture percentage” output for each probe-bin-material combination. The process of obtaining samples and bake-outs may take several weeks, depending on the weather, etc. If desired, modify COMMANDbatch material calculations to compensate for yield due to target adjustments. (See “Post-Installation Services” below for more information.)

**POST-INSTALLATION SERVICES:**

The Precision Water System is shipped with default calibrations for a variety of aggregate material classes. This allows the system to be used immediately upon installation. However, to deliver maximum benefit, the Precision Water System must be calibrated with at least 10 samples including a wide variety of moistures for each material.

During the abbreviated installation process, it is usually not possible to acquire enough samples with the range of moistures needed. To ensure a comprehensive calibration, system proposals will include four (4) hours of post-installation follow-up support. After completion of the installation, a Command Alkon technician will coordinate a series of follow-up telephone calls with your staff to answer any outstanding questions and to assist with the calibration process. Using COMMANDassist, the technician will have direct access to your COMMANDbatch system to walk your staff through any issues.

**[www.commandalkon.com](http://www.commandalkon.com)**

**Command Alkon Headquarters**

1800 International Park Drive, Suite 400  
Birmingham, Alabama 35243  
Phone: 1-205-879-3282  
Toll Free: 1-800-624-1872  
Fax: 1-205-870-1405