

## Electronic Water Add

The Electronic Water Add Solenoid allows the operator and dispatch to electronically (remotely) add water to a batch of concrete. Controlling water added is essential to maintaining the water/cement ratio of the ticket.

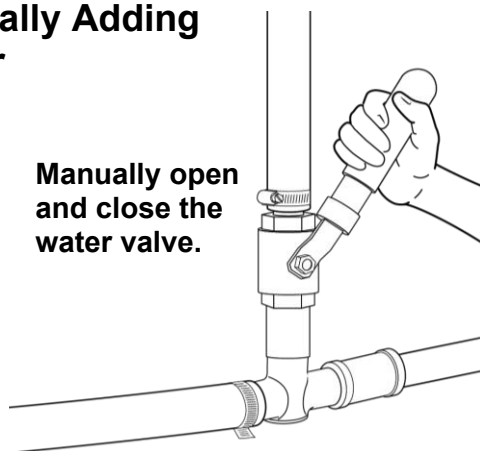
The solenoid valve works with a flow meter sensor (IFM or UFM) to accurately control the water amount added to the concrete. When a water request is entered on the tablet, the solenoid is opened instantly and water flows to the drum. The flow meter signals when the water amount is reached, then the solenoid valve is closed instantly.

This electronic system provides consistent water regulation ensuring the water/cement ratio is maintained.



**Electronic Water Add Solenoid** (requires a Flow Meter Sensor for use, reference the applicable IFM or UFM Flow Meter information).

### Manually Adding Water



Manually open and close the water valve.

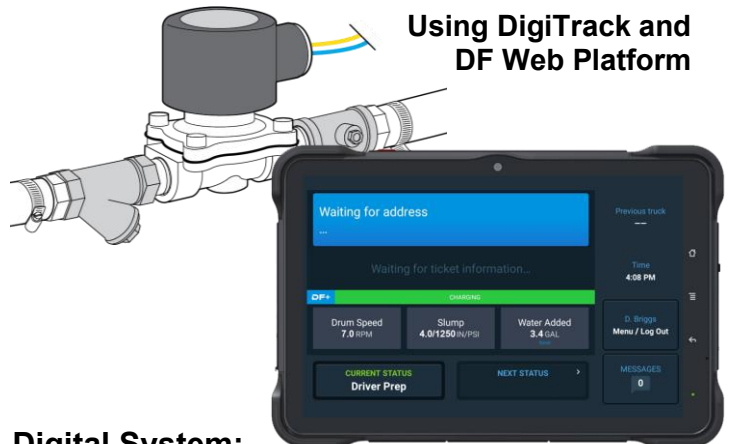
#### Operator Dependent:

- **Operator determines** water added to maintain the water/cement ratio of the ticket.
- **Operator manually opens and closes the water valve.** Typically, the valve is held open for a verbal count to estimate gallons of water released.

*Actual amount released varies depending on accuracy of the verbal count and tank flow type (i.e. pressurized tank vs. diaphragm pump).*

- **Contractor requests for additional water** to aid workability are rarely tracked. The operator must determine how much water has already been added, and if the request exceeds the allowable amount for the batch.
- **Lack of historical jobsite data** on when and how much water was added to the batch of concrete (typically, there no long-term records of the jobsite data).

### Electronically Adding Water



Using DigiTrack and DF Web Platform

#### Digital System:

- **Water amount is entered on tablet**—solenoid valve electronically opens/closes for the requested water (flow meter signals when water amount is reached).
- **System monitors water requests** to ensure water/cement ratio for the ticket is maintained.
- **System warns operator** of water add violations.
- **Contractor confirmation for a water add** is an available feature add-on (water requests require an approving party confirmation; messaging is tracked with the ticket).
- **Tracks water added** (when, where, and how much).
- **Removes inconsistency**—flow meter accurately monitors water and signals for solenoid to open/close.
- **Track job trends**, find inefficiencies and violations.
- **Statistics available** in real time (on tablet and web platform), and long-term with DigitalFleet.com.



# Understand Water Added

Understanding the water added to a batch of concrete (to meet a target slump or aid workability) keeps the water/cement ratio in balance. Each batch has a maximum amount of water that can be added without upsetting this ratio. The challenge is to control how much water was added, when it was added, and understand who requested the water.

## Manually Adding Water

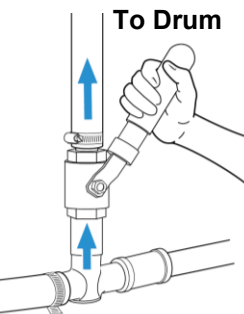
Older mixers have an inline valve to manually open and add water—the amount added can be inconsistent for various reasons, see diagram below. Some newer systems can enter a water amount on their screen, which provides more control. In both cases, the actual water data is not available unless it is relayed by the operator and recorded with the corresponding ticket.

**Water Add Challenges:**

1. **How much** water was added? (see A)
2. **When** was water added? (at plant; in transit; at jobsite—details are rarely recorded)
3. **Who** requested/approved the water? (see B)

**A** Tank styles have varied water flow rates (i.e. diaphragm pump vs. pressurized tank).

Water Tank



**B** Contractor requests additional water to aid workability (no formal request or approval is recorded with the job).

**A** Operator adds water to meet target slump and contractor requests.

**Amount added is not precise:** Operator opens the water valve and verbally counts out seconds of water (approx. 10 sec. = 1 gallon of water)

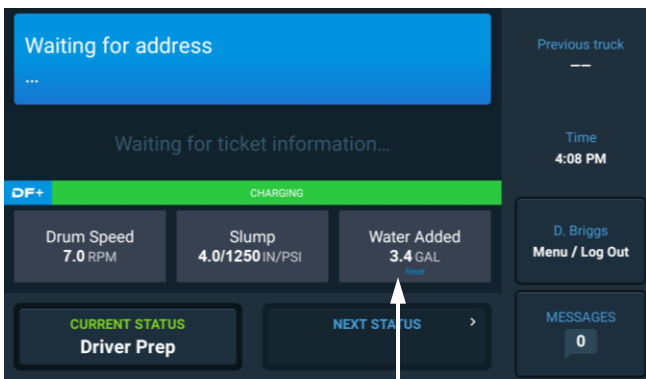
Digital Water Add

## Digital Fleet+ Electronic System

The electronic solenoid valve adds water to the drum on demand. Using the electronic valve requires a flow meter sensor (IFM or UFM) to control how much water is released, see diagram below. All data is monitored by the operator on the tablet (using DigiTrack) and remotely by the company on the Digital Fleet web platform.

Digital Fleet+ System maintains the maximum water per ticket:

- Tracks water added to maintain water/cement ratio for the batch.
- System warns operator when a water request violates the maximum allowed.
- Contractor requests for water (more workability) that exceed the maximum amount allowed require an override (typically a text confirmation/approval).



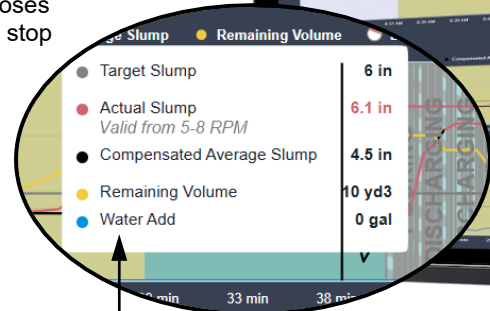
DigiTrack (tablet monitoring)

**1** Operator enters a Water Add amount (3.4 GAL shown).

To Drum

**3** Flow Meter signals when water amount is reached—then solenoid closes instantly to stop water flow.

DigitalFleet.com (remote monitoring)



Water added can be seen in real time on the tablet and on the website.

All data is available for future reference.

Water Tank

**2** Electronic Valve opens instantly to fulfill request.

For questions, please reach out to your administrator, or contact DF Support.