



Why Your Tobacco Plant Pays More for Water Than It Should — and How to Fix It

Water Flow Innovations LLC

Flow Conditioning Device (FCD)
waterflowinnovations.com

Your curing systems, conditioning, and HVAC all draw from the same supply — but your meter counts more than arrives. **Humidification system cycling, cooling tower makeup, and process washdown create the conditions for air, gas, and turbulence to form in the line at your meter — and you're billed for it.** The FCD (Flow Conditioning Device) corrects the measurement. Your process parameters and every product specification stay the same. Your water bill drops — and so does your sewer bill, because sewer charges are calculated from the same inflated meter reading. One device. Two bills fixed.

WHY TOBACCO MANUFACTURING FACILITIES WATER METERS OVER-READ

The Core Problem: Tobacco Humidification Systems Create the Highest-Frequency Cycling Demand of Any Agricultural Processing Facility

Tobacco manufacturing requires precise humidity control throughout curing, conditioning, and cutting — humidification systems cycling continuously to maintain moisture specifications. Each event generates air, gas, and turbulence in the line at the meter. Cooling tower makeup and washdown compound that over-reading. The FCD corrects total intake at the meter without changing any humidity setpoint or product parameter.

THE THREE OVER-READING SOURCES UNIQUE TO TOBACCO MANUFACTURING FACILITIES



Humidification System Cycling

Tobacco conditioning and humidification systems cycling continuously to maintain moisture specifications create high-frequency demand events — generating air, gas, and turbulence at the supply meter throughout every operating shift.



Cooling Tower Makeup

Facility HVAC and process cooling tower makeup cycling with building and production load creates continuous variable demand — compounding humidification over-reading throughout every operating day and billing cycle.



Process & Equipment Washdown

Cutting, blending, and packing equipment washdown between production runs creates high-velocity demand events — adding a third compounding over-reading source on top of humidification and cooling demand.



Your Water Intensity Per Unit of Product Is Better Than Your Meter Shows

Tobacco manufacturer sustainability reporting tracks water intensity per unit of production for Philip Morris International PMI Science disclosures, BAT sustainability reporting, and Altria ESG filings. When the meter over-reads humidification and cooling demand, every reported figure is inflated. After FCD installation, metered intake reflects true use — improving the accuracy of all reported water intensity metrics without changing any process or product specification.

BEFORE & AFTER THE FCD

WITHOUT FCD

- ✗ Air, gas & turbulence billed as water volume
- ✗ Humidification cycling inflates meter all shift
- ✗ Cooling tower makeup compounds over-reading
- ✗ Water intensity per unit overstated
- ✗ Sewer charge tied to inflated meter

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WITH FCD INSTALLED

- ✓ Metered volume reflects water actually delivered
- ✓ Humidification cycling reads accurately
- ✓ Cooling tower makeup measured correctly
- ✓ True water intensity per unit revealed
- ✓ Sewer charge based on real usage

5–30%

Average water & sewer bill reduction

46%

Highest documented single-site reduction

~1 Hour

Install time — water off about 1 hour

6-Mo

Money-back, no questions asked · install non-refundable

How the FCD Works — Four Steps

1

Installs between two pipe joints right after your water meter — water off about one hour

2

Creates a slight back-pressure that extends back through the meter, reducing air, gas, and turbulence

3

Delivers a laminar-like flow profile through the meter — the condition it was calibrated to read

4

Meter reads accurately. Bill drops. Every humidity setpoint, moisture specification, product parameter, and process protocol is effectively unchanged.