



Why Your Glass or Ceramics Plant Pays More for Water Than It Should — and How to Fix It

Water Flow Innovations LLC

Flow Conditioning Device (FCD)
waterflowinnovations.com

Your forming cooling, annealing, and scrubbers all draw from the same supply — but your meter counts more than arrives. **Glass forming cooling surges, lehr cooling demand, and exhaust scrubber cycling 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. Forming parameters and every process 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 GLASS WATER METERS OVER-READ

The Core Problem: Glass Forming Cooling and Lehr Systems Create Some of the Highest Thermal Load Water Demand in Any Manufacturing Process

Glass forming requires immediate high-volume cooling water to control thermal gradients — creating high-velocity demand surges on every forming cycle. Lehr annealing cooling adds sustained demand throughout every production run. Wet scrubbers compound both. Your forming temperatures, annealing curves, and product specifications are unaffected — all controlled downstream of the supply meter.

THE THREE OVER-READING SOURCES UNIQUE TO GLASS & CERAMICS MANUFACTURING



Glass Forming Cooling Surges

Glass forming cooling water surges on every forming cycle create high-velocity demand events — generating air, gas, and turbulence at the supply meter on every piece formed throughout every production shift.



Lehr Annealing Cooling Water

Lehr annealing zone cooling water running continuously to control temperature gradients creates sustained demand — one of the most consistent over-reading sources in any glass plant, running throughout every production run.



Exhaust Scrubber Cycling

Wet exhaust scrubber water demand cycling with furnace throughput creates variable demand events — adding a third compounding over-reading source on top of forming and lehr cooling demand every billing cycle.



Your Water Intensity Per Ton of Glass Is Better Than Your Meter Shows

Glass industry sustainability reporting tracks water intensity per ton of melted glass for EPA Sector F permit benchmarking, ISO 14001 environmental management, and customer scorecards (automotive glazing, packaging OEMs). When the meter over-reads forming and scrubber demand, every reported figure is inflated. After FCD installation, metered intake reflects true use — improving the accuracy of all metrics without changing any forming or annealing specification.

BEFORE & AFTER THE FCD

WITHOUT FCD

- ✗ Air, gas & turbulence billed as water volume
- ✗ Forming cooling inflates meter every cycle
- ✗ Lehr demand compounds over-reading
- ✗ Water intensity per ton overstated
- ✗ Sewer charge tied to inflated meter



WITH FCD INSTALLED

- ✓ Metered volume reflects water actually delivered
- ✓ Forming cooling reads accurately
- ✓ Lehr cooling measured correctly
- ✓ True water intensity per ton 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. Forming temperatures, annealing curves, scrubber performance, and every product specification are effectively unchanged.

FREE SAVINGS ESTIMATE

Instant estimate — takes 30 seconds, no contact info required.

waterflowinnovations.com/water-bill-savings-calculator

Water Flow Innovations LLC

2651 Route 412
Coopersburg, PA 18036
Info@WaterFlowInnovations.com
1-(844)-934-8258

CERTIFICATIONS

IAPMO NSF/ANSI/CAN 61 KIWA GMP SQF

316L Stainless Steel · Made in USA
Under 0.8 psi pressure loss
Lifetime Transferable Warranty