



The Flow Conditioning Device: Installation Point, Mechanism, and Meter Accuracy

Water Flow Innovations LLC

Flow Conditioning Device (FCD)
waterflowinnovations.com

INSTALLATION POINT & MECHANISM

Installed Just After the Meter — Ahead of Every Validated Process System

The Flow Conditioning Device (FCD) installs between two pipe joints on the main water line immediately after your water meter — ahead of your facility's internal distribution to washer banks and fill valves, water heating supply, and utility sink and facility lines. Each FCD is custom-built to the facility's exact specifications — pipe size, operating water pressure, and existing PRV configuration — and may include an integral check valve depending on the installation requirements. It requires no power and is installed by a licensed plumber or mechanical contractor with water off for approximately one hour.

Mechanically, the FCD creates a slight static back-pressure that extends back through the meter, reducing the air, gas, and turbulence that form during demand events and delivering a laminar-like flow profile through the measurement chamber.

Municipal meters register volumetric displacement — entrained air and turbulent flow register as billable volume. Pressure loss through the device is under 0.8 psi across all flow conditions; downstream pressures, temperatures, and flow rates are effectively unchanged. Because the FCD sits just after the meter, it is outside your machines, water heating, and store operations — no equipment change is required. Complete technical documentation is provided to support your internal change control review.

DIAGNOSTIC CHECKLIST — SIX SIGNS YOUR METER IS OVER-READING

- ☐ **Bills rising without machine or hour increases**
Water charges climb with no added machines or extended operating hours.
- ☐ **Cost per load above benchmarks**
Water cost per load persistently exceeds coin laundry industry benchmarks.
- ☐ **Sewer charges tracking water up**
Sewer charges follow the inflated meter reading — the over-read is billed twice.
- ☐ **Air at machines or pressure inconsistency**
Air discharge at machine fills or inconsistent pressure — the same entrained air registers as billable volume.
- ☐ **Audits found consumption but no source**
Water audits confirmed high consumption without finding leaks or a source.
- ☐ **Water treated as a fixed cost**
Water bills are accepted as a fixed cost of doing business.

WHERE OVER-READING HITS THE OPERATION

- Cost per Load & Store Margin**
Inflated intake flows directly into cost per load — in a business where water is the biggest utility line, meter accuracy is margin.
- Dozens of Fill Valves, All Day**
Simultaneous washer fills are constant high-velocity demand events — exactly the conditions that entrain air at the meter, cycle after cycle.
- Sewer Billed from the Same Meter**
Sewer charges calculated from metered intake bill every over-read gallon twice — water side and sewer side.
- Multi-Store Benchmarking**
Store-to-store cost comparisons are distorted when meters over-read differently — correction gives true per-store numbers.

ENGINEERING Q&A

Q: Will the FCD affect machine fill times, wash performance, or water heating?

A: No. Pressure loss through the FCD is under 0.8 psi across all flow conditions, and it installs ahead of the store's distribution. Fill valve pressure, cycle times, and water heater supply are effectively unchanged.

Q: What's the connection between air at the machines and my bill?

A: That air passed through your supply meter first — where it registered as billable water. Visible or audible air at fill valves is one of the most direct field indicators of meter over-reading.

Q: How does the FCD affect sewer charges?

A: Sewer charges are typically calculated from metered intake, so every over-read gallon is billed twice. After installation, intake reflects actual consumption, reducing both line items.

Q: How do I estimate savings before committing?

A: Use the Water & Sewer Bill Savings Calculator at waterflowinnovations.com — enter your current monthly bill for an instant projection, then request the free savings analysis for a documented, store-specific number. No commitment at either step.

Q: How quickly do savings appear?

A: The meter reads accurately immediately after installation. Savings appear on the next full water and sewer billing cycle — no ramp-up period. 90% of installed customers reach full return on investment in under 12 months.

ENGAGEMENT PROCESS — FOUR STEPS

From Analysis to Verified Bill Reduction

1

Free Savings Analysis

We review your water and sewer bills and facility demand profile — no cost, no obligation.

2

Documented Projection

You receive a written savings projection specific to your facility before any commitment.

3

FCD Installation

Licensed plumber or mechanical contractor installs immediately after the meter — water off approximately one hour.

4

Verified Bill Reduction

Before-and-after bill comparison verifies the reduction on your next billing cycles.

GUARANTEE & WARRANTY TERMS

6-Month Money-Back Guarantee

If you're not satisfied within 6 months of installation, the FCD purchase is fully refunded — no questions asked. Installation labor is non-refundable.

Lifetime Transferable Warranty

The FCD carries a lifetime warranty, transferable to the new building owner if the facility changes hands (a transfer fee applies).

DEVICE SPECIFICATIONS

Construction, Certification & Installation

Custom-built to each facility's specifications — pipe size, operating pressure, PRV configuration · 316L stainless steel construction; titanium and specialty alloys available by special order for medical and other specialized applications · Configuration may include an integral check valve per installation requirements · No power required · Under 0.8 psi pressure loss · Certifications: IAPMO, NSF/ANSI/CAN 61, KIWA, GMP, SQF · Installed by licensed plumber or mechanical contractor

Regulatory & Standards References: Coin Laundry Association · EPA WaterSense