



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 domestic riser and booster supply, laundry rooms, irrigation and amenity lines, and central boiler or water heating feed. 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 resident services and building operations — a one-hour scheduled shutdown with standard resident notice is the only impact. Complete technical documentation is provided to support your internal change control review.

DIAGNOSTIC CHECKLIST — SIX SIGNS YOUR METER IS OVER-READING

☐ Bills rising without tenant increases

Water charges climb year over year with no corresponding change in occupancy.

☐ Sewer moving in lockstep with water

Sewer charges follow the inflated meter reading — the over-read is billed twice.

☐ Cost per unit above comparables

Water cost per unit persistently exceeds comparable buildings in the portfolio.

☐ Audits confirmed usage but not the source

Water audits confirmed high usage without identifying leaks or a source.

☐ Air or pressure variability at fixtures

Observable air or pressure variability at unit fixtures — the same entrained air registers as billable volume.

☐ Water treated as uncontrollable

Water is budgeted as an uncontrollable operating expense.

WHERE OVER-READING HITS THE OPERATION

Operating Expense & NOI

Inflated intake flows directly into operating expenses and NOI — on master-metered properties, every over-read gallon hits the owner twice.

The Audit That Finds Nothing

Fixture audits count water that arrives; over-read volume never arrived and is invisible to them — the source is the flow conditions at the master meter.

Booster & Laundry Demand Events

Booster pump starts and laundry room cycling create exactly the high-velocity events that entrain air at the meter — all day.

Portfolio Benchmarking

Building-to-building cost-per-unit comparisons are distorted when meters over-read differently — correction gives true numbers.

ENGINEERING Q&A

Q: Will the FCD affect water pressure, laundry, or any resident service?

A: No. Pressure loss through the FCD is under 0.8 psi across all flow conditions, and it installs ahead of building distribution at the master meter. Riser pressure, laundry performance, and every resident service are effectively unchanged.

Q: What does installation involve for residents?

A: A licensed plumber installs the FCD at the master meter in approximately one hour with water off — scheduled and noticed like any brief maintenance window. No unit access is required.

Q: How does the FCD affect sewer charges?

A: Sewer charges are typically calculated from metered intake. When the master meter over-reads booster and laundry demand, both charges are inflated. After installation, intake reflects actual consumption, reducing both line items.

Q: How do I estimate savings for my building before committing?

A: Use the Water & Sewer Bill Savings Calculator at waterflowinnovations.com for an instant projection, then request the free savings analysis — a documented, building-specific projection suitable for an owner or asset manager package.

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: EPA WaterSense · ENERGY STAR Multifamily · NAA