



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 food court and restaurant tenant service, restroom cores, HVAC cooling tower makeup, and irrigation and water features. 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 master meter, it is outside tenant operations — an overnight scheduled shutdown with standard 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 occupancy growth

Water charges climb year over year with no corresponding change in tenancy or traffic.

☐ Sewer moving in lockstep with water

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

☐ CAM water above comparable centers

Water cost per square foot persistently exceeds comparable properties.

☐ Audits confirmed usage but not the source

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

☐ Pressure variability at tower makeup

Cooling tower makeup and food court draw produce visible pressure swings — entrained air registers as billable volume.

☐ Water treated as uncontrollable CAM

Water is passed through CAM as an uncontrollable expense rather than corrected.

WHERE OVER-READING HITS THE OPERATION

CAM & NOI Impact

Inflated intake flows into CAM and NOI — on master-metered centers, every over-read gallon is billed twice via water and sewer.

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.

Tower & Food Court Demand Events

Cooling tower level calls and food court draw create exactly the events that entrain air at the meter — all operating hours.

Portfolio Benchmarking

Center-to-center cost comparisons are distorted when meters over-read differently — correction gives asset managers true numbers.

ENGINEERING Q&A

Q: Will the FCD affect tenant water service, cooling towers, or water features?

A: No. Pressure loss through the FCD is under 0.8 psi across all flow conditions, and it installs ahead of property distribution at the master meter. Tenant service, tower makeup, and every amenity are effectively unchanged.

Q: What does installation involve for tenants?

A: A licensed plumber installs the FCD at the master meter in approximately one hour with water off — scheduled overnight like any brief maintenance window. No tenant disruption.

Q: How does the FCD affect sewer charges?

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

Q: How do I estimate savings for the property 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, property-specific projection suitable for an asset management 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 · ICSC

FREE SAVINGS ESTIMATE

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

waterflowinnovations.com/water-bill-savings-calculator

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CERTIFICATIONS

IAPMO NSF/ANSI/CAN 61 KIWA GMP SQF

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