



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 guest room risers, laundry systems, pool and spa supply, kitchen and banquet lines, and HVAC cooling makeup. 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 guest services and property operations — a one-hour scheduled shutdown coordinated by engineering 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 increases

Water charges climb year over year with no corresponding change in occupancy or F&B volume.

☐ Sewer charges tracking water up

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

☐ Laundry and pool use seem high

Laundry and pool consumption runs above what load counts and schedules predict.

☐ Audits found usage but no source

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

☐ Air or spitting at guest room fixtures

Air discharge at guest fixtures — the same entrained air registers as billable volume at the meter.

☐ Water treated as uncontrollable

Water and sewer are budgeted as uncontrollable operating costs.

WHERE OVER-READING HITS THE OPERATION

Cost per Occupied Room & GOP

Inflated intake flows directly into cost per occupied room and gross operating profit — billed on both the water and sewer side.

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 meter.

Laundry & Pool Demand Events

Laundry cycles and pool equipment starts create exactly the high-velocity demand that entrains air at the meter — all day, every day.

Brand & Sustainability Reporting

Brand sustainability programs and Green Key/LEED data reference metered intake — over-reading overstates true water intensity per room.

ENGINEERING Q&A

Q: Will the FCD affect guest room water pressure, laundry, or pool operations?

A: No. Pressure loss through the FCD is under 0.8 psi across all flow conditions, and it installs ahead of property distribution. Guest room pressure, laundry performance, pool systems, and kitchen lines are effectively unchanged — guests never notice anything.

Q: Guests report air spitting at fixtures — what does that mean?

A: That visible air is the same entrained air passing through your supply meter — where it registers as billable water. Audible air at fixtures 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. When the meter over-reads laundry and pool demand cycling, both charges are inflated. After installation, intake reflects actual consumption, reducing both line items.

Q: Can documented savings support brand sustainability reporting?

A: Yes, as cost documentation. Before-and-after utility bills verify the corrected billing. Because the FCD corrects the meter reading rather than reducing water use, confirm with your sustainability team how to report it for brand sustainability programs, Green Key documentation, and LEED performance data.

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: AHLA · Green Key · LEED · EPA WaterSense

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