



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 central sterile and CSSD supply, HVAC and cooling tower makeup, boiler feed, dietary and laundry lines, and domestic riser demand. 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 patient care systems, Joint Commission environment-of-care scope, and infection control protocols — no clinical or operational 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 patient volume

Water charges climb year over year with no corresponding change in census or procedures.

☐ Sewer charges tracking water up

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

☐ Sterilization and HVAC seem disproportionate

Central sterile and cooling consumption runs above what load calculations predict.

☐ Audits found usage but no 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.

☐ Utilities treated as fixed expenses

Utility costs are budgeted as non-negotiable fixed expenses rather than managed inputs.

WHERE OVER-READING HITS THE OPERATION

Operating Budget & Cost per Patient Day

Inflated intake flows directly into facility operating costs — dollars that should be going to care delivery, billed on both 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 meter.

Patient Care Systems Unaffected

Sterile processing, dialysis supply, and clinical systems are untouched — the FCD sits just after the meter, ahead of all facility water treatment.

Sustainability & Reporting

Healthcare sustainability commitments and energy/water benchmarking reference metered intake — over-reading overstates true intensity.

ENGINEERING Q&A

Q: Will the FCD affect sterile processing, dialysis water, or any clinical system?

A: No. Pressure loss through the FCD is under 0.8 psi across all flow conditions, and it installs immediately after the meter, ahead of all facility systems — including every stage of clinical water treatment. CSSD steam, dialysis RO feed pressure, and clinical parameters are effectively unchanged.

Q: How is installation handled at a facility that can't lose water?

A: The FCD installs in approximately one hour with municipal supply off, scheduled with plant operations like any planned utility shutdown — domestic storage and standard contingency protocols cover the window. Full documentation supports your environment-of-care review.

Q: How does the FCD affect our sewer charges?

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

Q: Can documented savings support 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 healthcare sustainability commitments, ENERGY STAR benchmarking, and system-level ESG reporting.

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: Joint Commission Environment of Care · ASHRAE 188 · ENERGY STAR · EPA WaterSense

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