



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 Kitchen & Beverage System

The Flow Conditioning Device (FCD) installs between two pipe joints on the main water line immediately after your water meter — ahead of your restaurant's ice machines, beverage dispensers, pre-rinse valves, and handwash stations. 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 kitchen equipment specifications, brand standards, and franchise operating procedures — no process change is required. Complete technical documentation is provided to support your internal review.

DIAGNOSTIC CHECKLIST — SIX SIGNS YOUR METER IS OVER-READING

- ☐ **Water cost per location above comparable stores**
Water and sewer cost per store persistently exceeds comparable-format, comparable-volume locations.
- ☐ **Sewer moves in lockstep with water**
Sewer charges follow the inflated meter reading — the over-read is billed twice.
- ☐ **Intake exceeds equipment math**
Metered volume won't reconcile against ice, beverage, and wash equipment demand.
- ☐ **Pressure swings during rush hour**
Lunch and dinner rush produce visible pressure swings — entrained air registers as billable volume.
- ☐ **Audits confirmed usage, not the source**
Facility audits confirmed high usage without finding leaks or an operational cause.
- ☐ **Water treated as a fixed store cost**
Water is carried as a fixed operating cost rather than a correctable line item.

WHERE OVER-READING HITS THE OPERATION

- Cost per Location & Franchise P&L**
Inflated intake flows into per-store water cost — with sewer billed from the same meter, every over-read gallon is billed twice.
- Rush-Hour Demand Events**
Ice, beverage dispensing, pre-rinse, and handwash cycling stack simultaneously during peak hours, creating the highest-frequency entrained-air conditions of any restaurant format.
- The Audit That Finds Nothing**
Facility audits count water that arrives; over-read volume never arrived and is invisible to them — the source is the flow conditions at the meter.
- Franchise & Brand Standards Reporting Isolation**
Kitchen and beverage equipment run downstream of the meter — the FCD corrects billing accuracy with no effect on brand equipment specs or franchise operating standards.

ENGINEERING Q&A

Q: Will the FCD affect rush-hour capacity, ice production, or beverage dispensing pressure?

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 kitchen equipment. Rush-hour throughput, ice production, and beverage dispensing pressure are effectively unchanged.

Q: How does the FCD affect sewer charges?

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

Q: Does this affect health department water pressure or backflow prevention requirements?

A: No. The FCD produces under 0.8 psi of pressure loss and does not alter your backflow prevention assembly or other code-required plumbing components. It has no effect on health department compliance.

Q: How do I estimate savings 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, facility-specific projection suitable for an internal review 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 a new owner if the property or business 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

Industry & Standards References: National Restaurant Association · International Franchise Association