



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 irrigation zones and controllers, pool and spa auto-fill, fountain and water feature supply, and main house and guest house domestic lines. 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 your irrigation programming, pool systems, and household water quality equipment — no system change is required. Complete technical documentation is provided to support your internal change control review.

DIAGNOSTIC CHECKLIST — SIX SIGNS YOUR METER IS OVER-READING

☐ **Bill high relative to similar properties**

Water charges run persistently above comparable estates in the area.

☐ **Irrigation doesn't match controller schedule**

Metered irrigation use exceeds what the programmed schedule and zone runtimes predict.

☐ **Seasonal spikes beyond irrigation season**

Bills climb seasonally beyond what irrigation demand alone explains.

☐ **Air or spitting at fixtures after irrigation**

Air at indoor fixtures after irrigation runs — the same entrained air registers as billable volume at the meter.

☐ **Pool auto-fill activating too often**

Auto-fill cycles more than evaporation predicts — its valve cycling also drives demand events at the meter.

☐ **Leak checks found nothing**

Plumbers and leak detection confirmed high usage without finding a source.

WHERE OVER-READING HITS THE OPERATION

Annual Utility Spend

Inflated intake flows directly into one of the property's largest recurring utility lines — billed on both the water and sewer side.

The Leak Check That Finds Nothing

Leak detection counts water that arrives; over-read volume never arrived — the source is the flow conditions at the meter.

Irrigation & Auto-Fill Demand Events

Zone valve openings and auto-fill cycling create exactly the high-velocity events that entrain air at the meter — daily, in season.

Estate Systems Unaffected

Irrigation performance, pool chemistry, water features, and household water treatment are untouched — the FCD is ahead of everything.

ENGINEERING Q&A

Q: Will the FCD affect irrigation performance or household water pressure?

A: No. Pressure loss through the FCD is under 0.8 psi across all flow conditions, and it installs ahead of the property's distribution. Zone pressure, coverage, pool systems, and household fixtures are effectively unchanged.

Q: We've had leak detection out twice and found nothing — why would this be different?

A: Leak detection finds water that arrives somewhere. Meter over-reading is volume that never arrived — air, gas, and turbulence from irrigation and auto-fill valve cycling, registered as billable water. It's invisible to leak detection by definition.

Q: What does installation involve at the property?

A: A licensed plumber installs the FCD at the municipal meter in approximately one hour with water off — no landscaping disruption beyond meter access, no access to the residence required in most configurations.

Q: How does the FCD affect sewer charges?

A: Where sewer is billed from metered intake, the over-read is charged twice. After installation, the meter reflects actual consumption, reducing both line items on the same bill.

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



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 · Irrigation Association Best Practices

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