

How the AquaFlow Valve Saves Money – and Water.

The engineering behind two distinct, compounding sources of savings.

The AquaFlow Valve generates savings through two independent mechanisms – one corrects what you are billed, the other reduces what you actually use. Understanding the difference is the key to understanding the ROI.

LEVER 1

Billing Correction

Meter accuracy

Meters over-register when flow is turbulent and air is entrained. The valve stabilizes pressure, compresses micro-air, and delivers smooth laminar flow – so the meter reads the water you actually use.

You stop paying for water you never consumed.

LEVER 2

Consumption Reduction

Time-based water events

Showers, faucets, hose bibs, and cooling loops are governed by time, not a fixed volume. With optimized flow, the same task uses less water per minute – invisibly to the end user.

Fewer gallons delivered for the same user experience.

1 The Hydraulic Problem

Why turbulent flow costs you money before a single drop is used

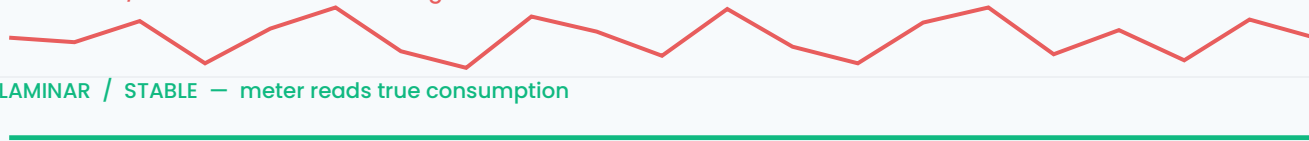
Water leaving a municipal main rarely arrives at your building in a clean, orderly stream. By the time it reaches your meter it carries pressure spikes, micro-vibration, and entrained air – a chaotic, pulsating flow pattern. A useful mental model: picture a heart-rate monitor. Turbulent flow is the jagged line that spikes and drops. Each of those spikes registers on your mechanical meter as volume – even when much of what is passing through is pressure artifact, vibration, or compressed air, not the water you are using.

Flow Signature at the Meter

Before installation (top) vs. after the AquaFlow Valve (bottom)

TURBULENT / ERRATIC – meter over-registers

LAMINAR / STABLE – meter reads true consumption



The AquaFlow Valve conditions the flow upstream of the point it matters most – the meter itself. Laminar, stabilized flow means the meter finally measures what it was engineered to measure: water.

2

Where Water Consumption Actually Drops

Measured-volume events vs. time-based events

Not every fixture in a building can be made to use less water — and that distinction is what most competitors get wrong. Water-using events fall into two categories, and the AquaFlow Valve only reduces consumption in one of them.

Measured-Volume Events

Fixed amount required — no gallon savings possible

- Toilet flush (fixed tank volume)
- Dishwasher cycle (pre-programmed)
- Washing machine fill
- Ice maker refill
- Pressurized tank top-off

Time-Based Events

User controls duration — optimized flow = fewer gallons

- Showers & bathtub fills
- Sink & hand-washing faucets
- Hose bibs & irrigation run-time
- Cooling tower / boiler make-up
- Pool & fountain fill
- Car wash spray cycles

The intuition: a person never says "I'm going to take a 15-gallon shower." They say "I'll take a 15-minute shower." Duration is what they control — gallons are simply a function of how efficiently water is delivered over that time. With optimized, laminar flow, the same 15 minutes at the same perceived pressure can deliver 1–3 fewer gallons — a difference the end user never feels, multiplied across every time-based draw in the building.

Measured events use a fixed volume. Time-based events use a flow rate. The AquaFlow Valve reshapes the flow rate — so every time-based draw delivers the same user experience with fewer gallons.

3

The Combined Financial Effect

Correction plus reduction — the reason Year 1 ROI lands where it does

A typical commercial building experiences both problems simultaneously: a meter over-registering on turbulent flow, and dozens of time-based water events consuming more than the user would ever notice. The AquaFlow Valve solves both with one passive, sealed mechanical device — no power, no controls, no maintenance. Savings are measured and verified using the IPMVP Option B international standard, the same methodology used to validate hundreds of billions of dollars in performance contracts annually.

INDEPENDENT THIRD-PARTY VALIDATION

MARS Company

University of Maine PDC

IAPMO R&T · NSF/ANSI 61

NIST Handbook 44 bench — stable laminar flow documented downstream of the valve (July 2017).

Ph.D.-engineer evaluation — up to -6% meter over-registration corrected with valve installed (Sept 2021).

Listing K-17679, valid through April 2029 — potable water material compliance under IPC §605 / UPC §605.

6-Month

Money-Back Guarantee

Lifetime

Product Warranty

Over 90%

Recover Full Investment in Year 1