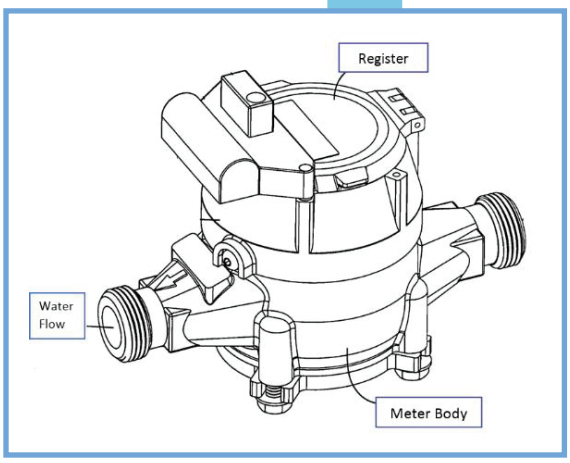
HOUSEHOLD
Water Meter Accuracy

Meter Accuracy

- The American Water Works Association establishes standardized accuracy ranges across the water industry to guarantee equitable and precise measurements, usually set at +/- 2%.
- Before deployment, each meter undergoes testing by the manufacturer, and the results are made public.
- Meter accuracy is a component of the meter's warranty, and any meters testing outside of the specified range can be declined and sent back to the manufacturer.



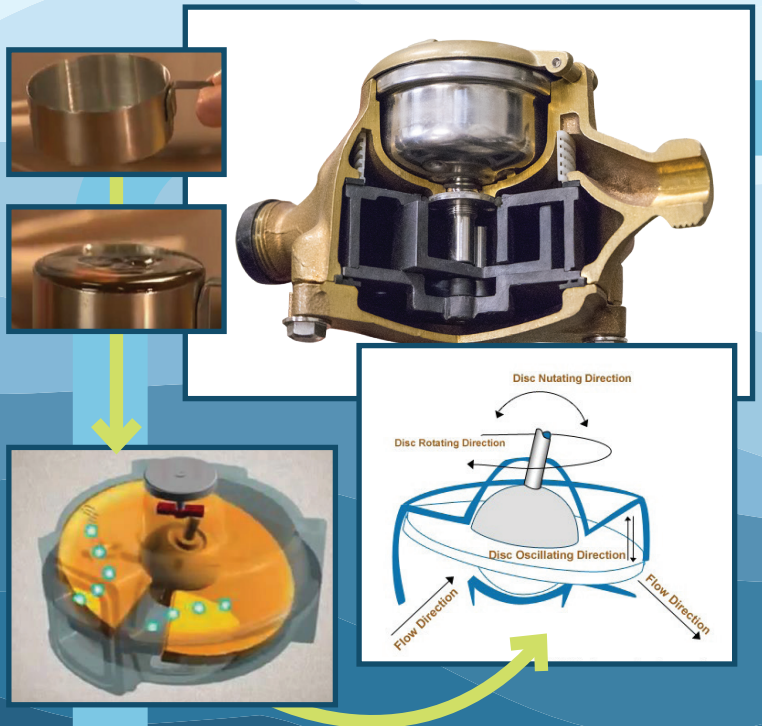
Is it possible for a meter to register too much?

- No. A typical household water meter cannot register more than the actual usage.
- This is because this type of meter operates similar to a measuring cup or bucket. Any surplus water beyond the capacity cannot be measured.
- "Can you explain how it resembles a measuring cup?"

  → The meter fills up, measures the amount, and then empties before being filled again.

What factors can lead to fluctuations in accuracy?

- This situation might arise when an outdated, deteriorated meter is swapped with a new one that measures water consumption more precisely.
- Additionally, a leak in the homeowner's plumbing system could result in higher-than-usual water bills.
- While a meter's accuracy naturally diminishes over time, it doesn't vary up and then down again within a few months; rather, it gradually decreases over an extended period.



How does my meter work?

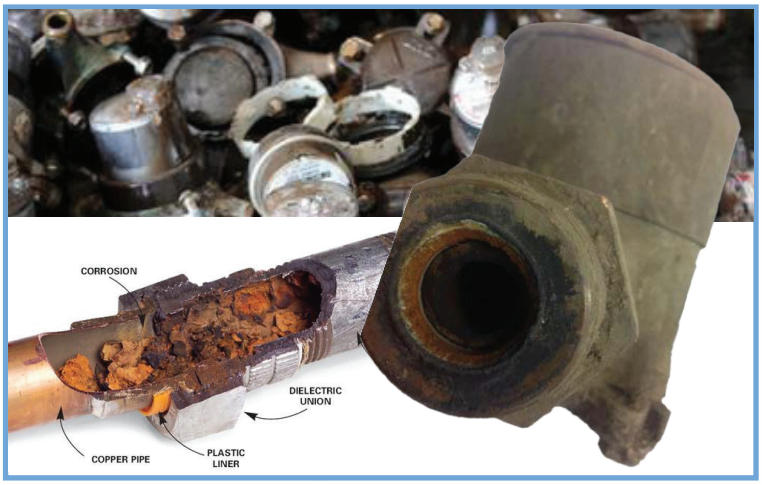
- Water enters the Meter Body and moves into the measuring chamber, which causes the measuring element (known as the "nutating" disc) to rotate.
- The rotations of the disc are then transmitted via a system of gearing to the register, where the flow is recorded.
- If any factors cause the disc to rotate an incorrect number of times per unit of volume, the meter reading will be inaccurate. In such instances, the meter will consistently register a lower value than the actual flow. More details are provided on the reverse side.

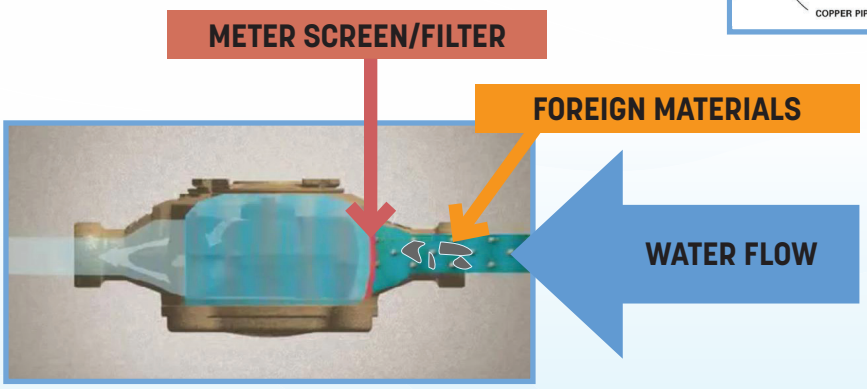
FACTORS

Affecting Water Meter Accuracy

Corrosion and Scaling

- Corrosion refers to the gradual deterioration or mineral buildup in pipes over time.
- It can result from various factors including the type of piping material, pH levels, oxygen exposure, temperature, water flow rate, and more. Corrosion might lead to noticeable changes in the appearance or taste of your water.
- Scaling, on the other hand, happens when minerals like calcium and magnesium naturally accumulate in pipes and fixtures.





Foreign Materials

- Meter strainers may occasionally get blocked if the water contains suspended particles and isn't kept reasonably clean.
- Since the measuring chamber operates akin to a measuring cup, any suspended materials can create friction between the measuring element and the chamber, causing a slowdown and leading to an inaccurate measurement of meter usage.

Excessive Wear

- Excessive wear and tear are inherent processes for all meters.
- Overwearing happens when meters are improperly sized, leading to accelerated wear and tear of the gears and components.
- Meters should be appropriately sized based on the expected continuous flow rates to minimize excessive wear.