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What is The Difference Between Multi-Jet and Positive Displacement Water Flow Meters?

A multi-jet water flow meter is a type of water meter used to measure the flow of water in residential, commercial, and industrial applications. It is called a "multi-jet" meter because it uses multiple jets or streams of water to measure the flow rate.

When water flows into the meter through an inlet pipe, the incoming water is divided into multiple small jets or streams. The jets are directed towards a series of impellers and as water flows through and strikes the impeller, they begin to rotate. (Impeller: a rotating device turned by the flow of water, used to measure speed, distance, or volume.) The speed of rotation is directly proportional to the flow rate of water through the meter. The rotation of the impellers is translated into a measurement of the volume of water passing through the meter. This measurement is usually displayed on a mechanical dial or registered electronically.

Multi-jet water meters are known for their accuracy and reliability, and they are often used in situations where a consistent flow of water needs to be accurately measured. They are also capable of measuring both low and high flow rates, which makes them suitable for a wide range of applications.

These meters are typically more resistant to debris and sediment in the water compared to other types of meters like the single-jet meter or the positive displacement meter, making them a popular choice for measuring water usage in various settings. Multi-jet water meters are relatively easy to install and maintain, however, they are only accurate when installed horizontally.

Discover Industries offers both [lead-free Stainless Steel](#) and [plastic multi-jet water meters](#).

A [positive displacement water flow meter](#) is a type of flow meter used to measure the volume of water flowing through a pipeline or water distribution system. Unlike some other types of water meters, positive displacement meters work by physically displacing a known volume of water to measure flow accurately.

Positive displacement meters consist of two main chambers separated by a moving mechanism or rotor. These chambers are designed to trap a specific volume of water. As water flows through the meter, it enters one of the chambers and fills it. The rotor inside the chamber rotates in response to the water flow, and as it does, it displaces the water within the chamber. The rotation of the rotor is directly proportional to the volume of water passing through the meter. Each rotation of the rotor corresponds to a known volume of water, and this volume is accumulated and recorded as the total water usage. The totalized volume is typically displayed on a mechanical dial or registered electronically for easy reading and billing.



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Positive Displacement water flow meters are known for their high accuracy and ability to measure low flow rates effectively. They are often used in applications where precise water measurement is crucial, such as commercial billing purposes, indoor growing and stock feeding. They have some limitations, including susceptibility to wear and tear due to moving parts, sensitivity to water quality and impurities, and reduced accuracy at very high flow rates. However, [Discover Brand's Vertical Positive Displacement flow meter](#) can be installed in any orientation, making them more versatile compared to other meters that can only be installed horizontally.

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