Flow Elements

AWWONS®
DEFINING & CREATING

Orifice Plate

An orifice meter or orifice plate is a flat plate having a central hole that is placed across the flow of a liquid, usually between flanges in a pipeline. The pressure difference generated by the flow velocity through the hole enables the flow quantity to be measured.

An orifice plate is a device used for measuring flow rate, for reducing pressure or for restricting flow (in the latter two cases it is often called a restriction plate). Either a volumetric or mass flow rate may be determined, depending on the calculation associated with the orifice plate. It uses the same principle as a Venturi nozzle, namely Bernoulli's Principle which states that there is a relationship between the pressure of the fluid and the velocity of the fluid.

When the velocity increases, the pressure decreases and vice versa. Orifice Flange assembly can be manufactured in size ½" to 40" for class 150, 300, 600, 900,1500. We Manufacturer orifice Plate assembly as per BS1042 , ISO 5167, AGA Standards.

Venturi Meter

A venturi meter is a flow measurement instrument which uses a converging section of pipe to give an increase in the flow velocity and a corresponding pressure drop from which the flow rate can be deduced. They have been in common use for many years, especially in the water supply industry.

In a venturi meter, the flow velocity is measured by noting the pressure differences between the inlet and the throat of the venturi meter.

A venturi meter can be used to measure the flow rates of all incompressible flows (gases with low pressure variations, as wells as liquids).

Spools

We manufacture & supply upstream and down Stream pipe spools for flow meters such as, Orifice, Turbine meter & Liquid & Gas Ultrasonic meters.

Upstream and Downstream spools will be manufactured according to international standard & with suitable Material of carbon steel ASTM 105 & Stainless steel ASTM A182F316L.

Sight Flow Indicator (Sight Glass)

Sight Flow indicators are used to visually monitor and determine the flow of fluids. These affordable and easy-to-operate devices are installed directly in the process line and allow operators to qualitatively observe flow rate, direction, colour and clarity. The readings are then viewed through a glass viewing lens. There are two ways to deploy Sight Flow Indicators.

Individually at vital points along fluid lines Where alterations, disruptions or contamination of fluids are supposed to have occurred or in banks, all together, where simultaneous monitoring of multiple fluid lines is necessary.

Prepaid Water Meter

The TagMeter series is a unique range of Ultrasonic Water Meters without moving parts and full bore flow tube. They are ideal for use where mechincal meters tradintionally fail due to air or grit in the water or high ambient and liquid tempearaure conditions. Non-measurement of air improves custommer billing reliability. Aviable in different sizes DN-15, 20,25,40 & 50 .

Prepaid water meter can be used domestic as well as in industries also.This meassurement will give actual data of to the industries .

Rotary Positive Displacement (RPD) with EVCD

The RRM series rotary gas meter is a displacement type gas meter. The actual measurement is performed by two figure oval (8) shaped rotors rotating within a measurement chamber.

During a full revolution of the rotor a fixed volume is displaced from the inlet to the outlet of the meter while the number of revolutions represents the amount of volume passed. The volume is displayed on a direct

read counter type index. Several low and high frequency pulsars can be used for flow computing or control purposes. The devices are mainly applied for gas flow ranges from 0.2 up to 1000 m3/hr, and the pressure range up to 20 bars and may also be used in higher pressure installations.

The volume of gas closed between the measuring chamber walls and rotors is transported four times in one full cycle from the meter inlet to the outlet. The timing gears set the rotors at the angle of 90° one to the other. The gear train, and the incorporated gas tight and hermetic magnetic coupling, transfers the rotor rotation to the index unit, which is separated in that way from the pressure tight housing.

The actual volume of gas is indicated on the mechanical counter. The measurement cartridge, as a separate unit, is fixed in the pressure resistant housing. Raychem RPG rotary metes can be equipped (optional) with two thermo wells and two pressure tapping points. Therefore the rotary meters can be supplied with an Electronic Volume Conversion Device (EVCD). Raychem RPG offers a large variety in conversion devices so all required data can be provided and the best solutions for every project can be assembled.

Turbine Meter

Turbine meters are less accurate than displacement and jet meters at low flow rates, but the measuring element does not occupy or severely restrict the entire path of flow. The flow direction is generally straight through the meter, allowing for higher flow rates and less pressure loss than displacement-type meters. They are the meter of choice for large commercial users, fire protection and as master meters for the water distribution system. Strainers are generally required to be installed in front of the meter to protect the measuring element from gravel or other debris that could enter the water distribution system. Turbine meters are generally available for 1-½" to 16" pipe sizes.

Turbine meter bodies are commonly made of bronze, cast iron or ductile iron. Internal turbine elements can be plastic or non-corrosive metal alloys. They are accurate in normal working conditions but are greatly affected by the flow profile and fluid conditions

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