

Permutit® Orifice Plates for Efficient Measurement of Fluid Flow

Permutit® Orifice Plates are the simplest and most economical differential pressure-producing device to measure fluid flow under pressure in closed piping systems. Accurate to $\pm 1\%$, Permutit Orifice Plates are the less expensive alternative to either flow nozzles or Venturi tubes. When measurement tolerances are within their accuracy coefficient range, Orifice Plates are a practical choice for system control points.

Applications

Permutit® Orifice Plates measure liquids, gas or steam in virtually all closed pressure piping systems. Utilized in both fossil fueled and nuclear powered steam/electric generating plants, they are particularly applicable for a wide range of boiler applications from low pressure to supercritical.

Construction

Permutit® Orifice Plates are machined from plate. Surface finishes range from 125 RMS to #4 commercial grade. Depending upon your application, materials of construction can include:

- Carbon steel
- Series 300 stainless steel
- Monel
- Copper-Nickel

Advantages

- Accuracy of $\pm 1.0\%$ over Beta ratios from 0.2 – 0.7
- Lower cost than flow nozzles
- Versatile design for a wide variety of application, size and flow requirements
- Highly flexible and can be provided in piping sections built in accordance with 10CFR50, Appendix B, ANSI B31.1 (complete with all Q.A. documentation)



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Quality Control

We have been the trusted source for all grades of nuclear components for many years. Our capabilities include dissimilar metal welding and fabrication to ANSI and RDT specifications. We meet the requirements of the ASME Codes and 10CFR50, Appendix B through our stringent quality assurance program.

The Advantage

As the leader in the water treatment industry, Siemens Water Technologies has the greatest depth of personnel and technological resources to overcome any challenge. We offer the wide variety of specialty products for the power generating industry, including many custom components. Please contact us for additional information about your specific requirements.

Design Features

- Permutit® Orifice Plates are offered in concentric, eccentric or multi-hole designs and either paddle or ring type configurations
- Available in a full range of sizes, they can be installed in pipes from 1/2" to 36" nominal diameters
- They are designed to ASME and ISA Standards and can be supplied with ANSI 300# orifice flanges or within a meter run
- All variations of length, pressure rating, couplings and materials are available

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