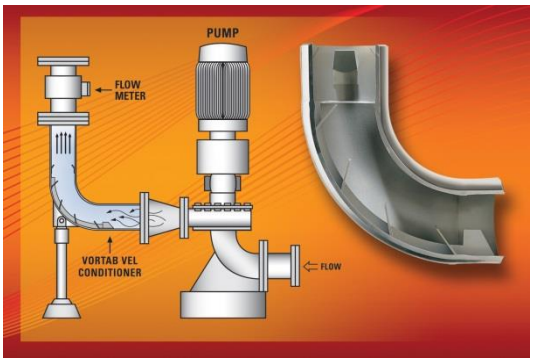
Vortab Elbow Flow Conditioner Removes Swirl For Accurate Flow Measurement

Ideal for Retrofits in Crowded Muni Water Treatment Plants



San Marcos, CA — Process and plant engineers who can't find room for the recommended straight pipe run required by liquid flow meters in their municipal water treatment plant retrofit projects will find the **Vortab Elbow Flow Conditioner** from **The Vortab Company** eliminates the problem by removing swirl and asymmetric velocity profiles caused by pumps, valves and other equipment placed too close to the meter.

To provide accurate and repeatable flow measurement, electromagnetic and other types of flow metering technologies used in municipal plants for drinking water require a specific amount of straight pipe run upstream and downstream from the installed location of the meter. The straight pipe runs create a swirl-free and symmetric velocity profile in the pipe that can be measured accurately over and over again.

When flow meters are moved or added during retrofit projects at municipal water treatment plants to accommodate new equipment, such as pumps, valves or other devices, problems can occur. Often there isn't enough available plant real estate left to support the new equipment.

The Vortab Company's elbow flow conditioner nearly eliminates the flow meter upstream piping requirements by conditioning the flow stream into a flow regime, mimicking adequate straight run. In addition to conditioning the flow stream, the 90-degree angle tab-type Vortab Elbow Flow Conditioner eliminates the pipe cost and technician labor for the 5 to 10 upstream and 3 to 5 downstream pipe diameters required by many types of flow metering technologies.

The Vortab Elbow was developed using the same tab-type flow conditioning technology as the straight run Vortab Flow Conditioners, which have been laboratory proven and successfully installed in hundreds of plants worldwide. To validate the

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Vortab Elbow's unique design--ball valves, gate valves, out-of-plane and in-plane elbows and swirl generators were installed at the immediate inlet of the Vortab elbow and tested in state-of-the-art gas and liquid calibration facilities.

The Vortab Elbow Flow Conditioner isolates the flow irregularities and conditions the flow stream into a swirl-free and symmetrical velocity profile. Swirl reduction and velocity profile correction occur naturally in long lengths of straight pipe due to diffusion and turbulent mixing. Vortab's anti-swirl and inclined vortex generating profile correction tabs, projecting from the inside pipe surface, generate vortices that accelerate these natural pipe effects to create a uniform, non swirling, symmetrical flow profile in a much shorter section of pipe.

The simple, flexible designs of the Vortab Elbow, the Vortab Insertion Panel (VIP) and the Vortab Insert Sleeve, Short Run, Meter Run and Field Kit configurations provide a cost effective solution to crowded installations for flow meters and other critical process equipment. Vortab provides the most effective flow disturbance isolation, lowest pressure drop and least affected by fouling of any of the flow conditioners available.

Vortab flow conditioners can be made from carbon steel, 316L stainless steel or Hastelloy C-276. A variety of process connections are also available--ANSI flanges, male NPT threads, butt welded preps or retaining wafers. Delivery time for the VORTAB flow conditioner is available in less than five weeks, depending on size. Custom configurations are also available from the factory.

The Vortab Company is a global supplier committed to meeting the needs of its customers through innovative solutions to the most challenging requirements for optimizing flow meter accuracy and repeatability in gases or liquids.

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