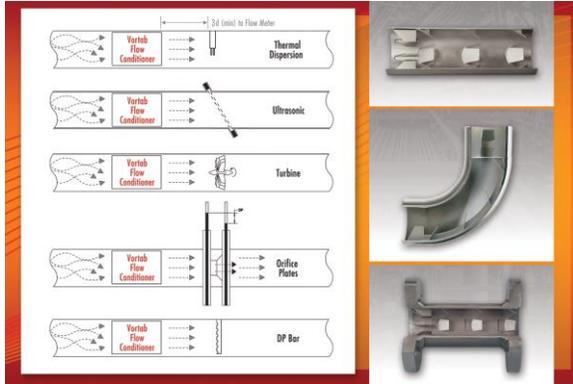




VORTAB[®]
COMPANY

Vortab Flow Conditioners Protect Compressors and Other Equipment By Reducing Swirl and Velocity Distortion

Ideal Wherever Crowded Equipment Conditions Exist



San Marcos, CA — Swirling fluid flows and asymmetric velocity profile distortions resulting from crowded plant conditions where insufficient pipe straight runs exist upstream and/or downstream from sensitive equipment such as gas compressors, pumps, valves and flow instruments can be mitigated if not entirely eliminated with the [Vortab Flow Conditioners](#) from [The Vortab Company](#).

The efficiency of natural gas compressors can be easily reduced by such disturbed flow conditions, which also potentially increases maintenance and the total cost of operating gas pipelines. Gas with swirling or asymmetric velocity flow profiles can result as gas is routed through compressor stations on long, complex pipelines and into storage facilities due to shortages of real estate, crowded equipment conditions, the use of pipe elbows or valves and variable pipeline demand.

Multiple types of equipment including gas compressors, pumps, valves and flow instrumentation require relatively long lengths of pipe straight-run for high efficiency operation. It can take up to 145 pipe diameters of unobstructed straight pipe run to eliminate both swirl and velocity profile distortions. Vortab flow and process conditioners isolate such flow disturbances and create a swirl-free, symmetrical, and repeatable velocity flow profile in just a few pipe diameters to keep equipment running efficiently.

The Vortab Company's product line of flow conditioners nearly eliminates the upstream straight pipe run requirements for many types of equipment and instruments by conditioning the flow stream into a regular flow regime to mimic adequate pipe straight run. In addition to conditioning the flow stream, the use of a flow conditioner eliminates the pipe cost and technician labor for the purchase of additional lengths of pipe straight run and the labor for its installation. Many times, however, sufficient plant real estate is simply not available to accommodate the required pipe straight-run.

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The Vortab flow conditioners feature tab-type flow conditioning technology, which has been laboratory proven and successfully installed in hundreds of plants worldwide. To validate their unique flow conditioning design, they have been tested with swirl and velocity profile distortion generators in state-of-the-art gas and liquid calibration facilities.

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 gas compressors, pumps, valves, 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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