



Vortab VIP Flow Conditioner Tames Turbulent Flows To Reduce Flow Meter Straight-Run Requirements

Lightweight, Flat Panel Design Saves On Installation and Operational Costs

San Marcos, CA — The Vortab Insertion Panel (VIP) Flow Conditioner features a unique design that maximizes flow meter performance with minimal pressure drop in a simple to install, lightweight thin panel design that overcomes turbulent pipe flow profiles.

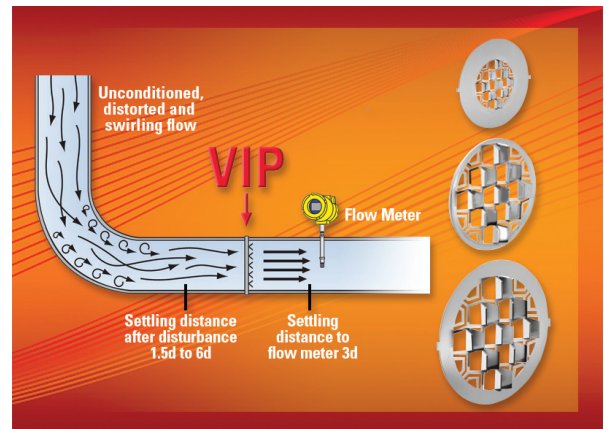
The Model VIP blends the proven performance and superior low pressure drop of Vortab tab-type flow conditioning technology with the low cost and ease-of-installation of an insertion panel type flow conditioner solution. Vortab tab-type flow conditioning technology

greatly reduces the pressure drop compared to alternative technologies such as tube bundles, screens and perforated plates. Minimizing pressure drop is a significant design consideration in flow conditioning for process engineers to minimize plant energy consumption and energy costs.

Multiple flow meter technologies, and particularly center-point types, require several diameters of straight pipe run to meet their meter's accuracy specifications. The straight-run is necessary to provide a highly repeatable symmetrical and swirl-free flow profile to the flow sensor for accurate and repeatable flow measurement. Unfortunately, most process industry plants are rich with elbows, valves, tees and real estate limitations that make the flow meter's required pipe straight-run configuration difficult to achieve.

The Vortab VIP Insertion Panel Flow Conditioner solves the pipe straight-run dilemma. A VIP installed in just 3 pipe diameters downstream from the flow disturbance and with the flow meter installed at just 3 pipe diameters downstream of the VIP neutralizes the flow disturbance and produces the symmetrical and swirl-free repeatable flow profile that ensures a flow meter installation meets its accuracy and repeatability specifications. The thin, lightweight panel design of VIP is easily installed between flanges or can be welded in place.

The Model VIP Flow Conditioner is particularly effective with wide turndown and/or low flow sensitive flow meter technologies, such as thermal dispersion, that measure in transitional flows. The VIP provides



a highly repeatable flow profile during laminar, transitional and turbulent flow conditions. VIP has been extensively tested in Vortab's NIST traceable flow stands under actual installation conditions with elbows, valves, headers and other flow disturbers.

VIP is easy to order and specify. The standard Model VIP Flow Conditioner is manufactured of 316L stainless steel in sizes for installation in pipes from 2 to 40 inch diameters (50 to 999.9 mm). Other materials and larger line sizes are available upon request. They are available in both ANSI and DIN flange-mount or weld-in-place configurations. A typical VIP weighs less than 20 ounces (560 grams) per diameter which means it is easily transported and installed on site without using special handling equipment.

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