VP\_US01a February 2003

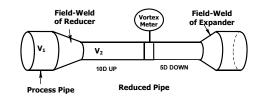
# ROSEMOUNT REDUCER™ VORTEX MINIMIZES PROJECT RISK AND SAVES OVER \$500\* PER FLOW POINT.

The use of Vortex flow meter technology has increased dramatically over the past 10 years, due primarily to its ability to reduce installation costs and improve reliability.

There is, however, risk associated with applying Vortex technology as a generic replacement for orifice installations. The most common is associated with the low flow cut-off inherent to all Vortex flowmeters. The Low Flow Cutoff prevents the Vortex meter from measuring to zero flow, and in some applications can prevent the meter from measuring flow rates required for proper plant operation.

#### **MEASURING LOWER**

To achieve good performance at lower flows, nearly 70% of all Vortex meters installed are smaller than the process line size, and require reduced piping. Specifically, the piping is reduced upstream to increase the velocity through the meter (thus extending the flow range) and then expanded back to the process piping downstream of the flowmeter. This allows the meters to perform well, but ads complexity and cost. By building the reducer and expander integral to the meter, Reducer Vortex simplifies these installations.



Traditional Reduced Line Vortex Installation

### **REDUCING RISK**

Because of the potential need for reduced piping, it is best to size each vortex flowmeter point prior to installing the process piping. However, if the flows are not well known at the time of sizing, the wrong piping may be installed, and may need to be re-worked to accommodate the meter.

Rosemount Vortex has solved this issue by offering the 8800CR Reducer Vortex with integral reducing and expanding flanges. By designing the reducer meter with the identical face-to -face dimension as the standard, either can be selected with no changes to the piping dimensions or flanges. This minimizes the risk of running piping before the process conditions (flowrates) are well established.



# **REDUCING COST**

Not only does this design minimize the piping risk; it reduces installation cost by eliminating the field welding of the reducer, meter run and expander for those applications that require reduction. Below is a graph of estimated savings by process line size.

**Example:** 4 inch Vortex in 6 inch process pipe:

Material costs (Carbon Steel): Pipe, Reducer & Expander = \$188

Labor:

4 total field welds (3 hours each @ \$50/hr) = \$600

Total Savings = \$788US per flow point

The 8800CR Reducer Vortex retains the proven reliability of the Rosemount Model 8800C Vortex by utilizing the same all-cast, non-clog, crevice-fr

Installation Costs for Field Welding of Reducers and Piping

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by utilizing the same all-cast, non-clog, crevice-free meter body design.

<sup>-</sup>Typical Savings. Saving dependent on line size.





# Model 8800C

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## **Emerson Process Management.**

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