By Jesse Yoder, Ph.D.



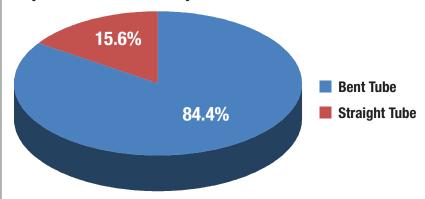
## **When Performance Matters**

oriolis flowmeters are the most accurate flowmeters made. While many magnetic flowmeters have accuracies in the range of 0.5 percent, many Coriolis flowmeters achieve accuracy of 0.1 percent. It is the high accuracy of Coriolis flowmeters that is one of the major reasons for their extremely rapid growth over the past five years. Companies that need flowmeters for custody-transfer or want highly accurate measurements in terms of mass have a good reason to select Coriolis flowmeters.

Suppliers have made a number of improvements in Coriolis technology over the past five years. Coriolis meters are now more adept at measuring gases than previously. The majority of Coriolis suppliers now have meters that can measure gas flow. Straight-tube meters have become more accurate

and reliable, thereby addressing some of the drawbacks of bent tube meters. These include pressure drop, the ability to measure high-speed fluids, and the tendency of bent tubes to impede the

→ Shipments of Bent Tube and Straight Tube Coriolis Flowmeters in North America in 2009 (Percent of Dollars)



Source: The World Market for Coriolis Flowmeters, 3rd Edition

progress of fluids. And both Micro Motion (www.micromotion.com) and Endress+Hauser (www.endress.com) have broken the price barrier, offering Coriolis meters for considerably less than they were previously.

The large majority of Coriolis flowmeters have in the past been sold for line sizes below two inches. However, in the past several years, a number of companies have brought out Coriolis flowmeters in line sizes above six inches. Despite their higher cost, companies are using these meters due to their high accuracy and reliability. Companies that have entered the large line-size market include Rheonik (now owned by GE Measurement & Control, www.ge-mcs. com), Endress+Hauser, Micro Motion, and KROHNE.

Until 1994, all Coriolis meters were bent-tube meters. While benttube meters still have advantages over many traditional meters, they

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do introduce pressure drop into the system. KROHNE (*www.krohne.com*) introduced the first commercially successful straight-tube Coriolis meter in 1994. Since that time, they have become increasingly popular with Coriolis users. Straight-tube meters address the problem of pressure drop because the fluid does not have to travel around a bend.

www.flowcoriolis.com

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