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Worldflow Flash Report

Azbil Group Acquires 70% Stake in Vortex Manufacturer VorTek Instruments

Wakefield, MA (February 28, 2013) – Azbil Group, the Japanese-based manufacturer of measurement and control technologies, has announced it has acquired a 70% stake in VorTek Instruments LLC through its U.S. subsidiary, Azbil North America, Inc. With this acquisition, the firm has become an Azbil Group company and will change its name to Azbil VorTek LLC.

VorTek Instruments, established in 1995 and with an employee count of sixteen, has been known as a manufacturer and supplier of vortex and turbine flowmeters, with announced plans to offer ultrasonic flowmeters as well. All of VorTek's manufacturing is performed at their Longmont, Colorado headquarters facility.

Azbil Group at a glance:

Founded: 1906
 HQ: Tokyo, Japan
 FY2011 Revenues: US\$2.8 billion
 Employees: 8,300
 Ownership: Public (Tokyo Stock Exchange)
 Market Coverage: Worldwide

In 2008, the Yamatake Company began a name transformation from Yamatake to the present use of 'azbil' for both its group and subsidiary components. This process continued into 2012.

Azbil is organized into three major business areas: Building Automation, Advanced Automation, and Life Automation. Azbil has a well-developed flowmeter product portfolio consisting of magnetic, vortex, differential pressure, and open channel technologies. The company's measurement and control devices are deployed through all three divisions.

The azbil Group's flowmeter product line can be described as follows:

Vortex Flowmeters

Azbil's smart ultrasonic vortex flowmeter line, the ULTRA Vortexor, has dual ultrasonic sensors that cancel the effect of temperature on ultrasonic wave transmission speed and offer redundancy in case of failure. If one of the sensor pairs fails, the remaining pair will continue to measure flowrate. The ULTRA Vortexor measures flow in a variety of fluids: pure water, ion exchange water, tap water; organic solvent; and analog and/or pulsed output. The Vortexor outputs a signal of 4-20 mA DC pulse or alarm that is proportional to flowrate.

The company's most recent vortex series, the MVF (Microflow Vortex), offers a greatly expanded measuring range of 100:1, and can measure minute flowrates using a thermal flow sensor. The MVF also has built-in compensation for temperature and pressure, eliminating the need to install separate measuring devices. Azbil claims an accuracy of $\pm 2.0\%$ of flowrate for this series. This vortex series is designed for gas applications including air, natural gas, methane, nitrogen, carbon dioxide, propane, butane and other inert gases outside of the explosion limit range.

azbil's (Yamatake's) Flowmeter Product Line

Flowmeter Type	Series/Model
Magnetic	MagneW3000 PLUS+ Series (integral, remote designs), MagneW Two-wire PLUS+ (2-wire, explosion proof), MagneW HENRI Plus+ (high energy noise resistant), MagCUBE (water)
Vortex	MVF Microflow Gas Series (Thermal type); Model VRX ULTRA Vortexor
Differential Pressure transmitter	ST3000 Series 900, AT9000 Advanced Transmitter
Open Channel	MagneW 3000 Plus - Model NNK
Mass Flow Controllers	MCF Series, CMS Series, CMG Series

Magnetic Flowmeters

Azbil's magnetic flowmeter line includes four fundamental series: MagneW3000 Plus, the MagneW Two-wire PLUS, the MagneW HENRI Plus, and the MagCUBE. Azbil has designed these flowmeter types around particular groups of applications, and each series includes configurations that are geared toward specific application solutions. Examples here include the use of different liner materials, remote and integral design packages, submersibility, and the availability to purchase sensors and transmitters separately. This ability for end-users to match specific sensors and transmitters is not a unique offering by

azbil, but for some is a valued characteristic of the company's product deployment strategy.

The applications that azbil's magnetic flowmeter line are aimed at include the classic sweet spots for this technology. The MagneW3000 Plus Series is focused on applications found in the pulp & paper, chemical, petrochemical, and beverage applications. The MagneW Two-wire PLUS Series is very useful when operators desire to upgrade an



*VorTek Instruments; Longmont, Colorado
Photo by Flow Research*

existing flowmeter measuring point without incurring the expense of re-wiring to the location. The MagneW HENRI Plus is specifically designed to mitigate the effects of noise in slurries using high frequency pulsed direct current. And the MagCUBE is designed for the special requirements of indoor water utility applications such as chilled water, water filtration, and water usage monitoring.

Azbil also has one of the very few multivariable magnetic flowmeters on the market, the MCJ/MCM. The MTG11/15/18 is a two-wire magnetic flowmeter.

Open Channel Flowmeters

The MagneW 3000 PLUS Open Channel flowmeter represents another aspect of azbil's product strategy of designing their metering products to specific applications. In this case, the application includes both open channel and closed pipe measurements. The MagneW provides accurate flow measurement even at minimal flowrates, and is not affected by tidal levels or hydrostatic pressure changes. Because the detector is not present in the flowstream and has no moving parts, unnecessary maintenance issues for the user are minimized. Azbil claims that unlike for other open channel flowmeter designs, the MagneW's output is linear with the flowrate.

Mass Flow Controllers

Azbil's Series MCF is a mass flowmeter specifically engineered for compressed air or nitrogen use. It incorporates azbil's Micro Flow thermal mass-flowrate sensor. The MCF can measure mass flow with an accuracy of $\pm 3\%$ of full scale with a turndown ratio of 50:1. Forward and reverse flow integration functions are provided. The design is focused on air flow measurement, and leak detection in particular using thermal mass flow technology. Other models include the CMS Series and the CMG Series.

Azbil also has two lines of differential pressure transmitters (the ST3000 Series 900, and the AT9000 Advanced Transmitter), as well as a magnetic flowmeter designed for use in open channel applications (the MagneW 3000 Plus).