

# Application News

## Dishwasher Manufacturer Improves Efficiency with Electromagnetic Flow Meter

**Industry:** Test & Measurement

**Service:** Flowmeter Calibration

**Fluid:** Water

### Overview

Consumers replacing a dishwasher manufactured before 1994 with an ENERGY STAR qualified dishwasher can realize significant savings in utility costs. Earning the ENERGY STAR designation means a product meets strict energy efficiency guidelines set by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE).

Not only do ENERGY STAR qualified dishwashers use less energy than conventional models, they also require less water—helping to conserve valuable natural resources.

### Situation

The ENERGY STAR rating is a critical competitive stamp in today's dishwasher marketplace. Maintaining this "approval" is a manufacturer's most important priority. ENERGY STAR qualified dishwashers must be at least 41% more energy efficient than the current 2007 Federal standard.

In order to meet ENERGY STAR guidelines, a leading dishwasher manufacturer needed to test its products and report water usage to the DOE. Fill valve accuracy is an essential part of the efficiency control function on a modern dishwasher. As such, every batch received from fill valve suppliers must be sampled and tested. This application required precise flow measurement data.

### Solution

The dishwasher manufacturer chose Flow Technology's EL500 Series electromagnetic flow meter to obtain flow total and rate information to document its product's wash cycle efficiency. The EL500 meters represent the state-of-the-art for accurate low-flow measurement in water cycle and process applications. This new-generation sensor incorporates improvements to the magnetic distribution elements that enable accurate operation throughout all flow regimes, allowing an extended turndown.

### System Description

In this application, the EL500's compact size and extended flow range were drivers in the selection. The meter operates in flow ranges from 0.022 to 44 GPM (0.083 to 166.56 LPM). With no moving parts, it is also immune to calibration shifting.

The EL500 was paired the MC106B transmitter for local control with an ability to utilize RS-485 remote resetting. This panel-mounted display can be remotely mounted up to 650 ft from the flow meter and features transmitter programming through faceplate push buttons.

### Technical Information

System: 68603-BAA-AAA

Flow Meter (Model Number): EL500-006NPTSPLAA

Electronics (Model Number): MC106BCVH3D4Q21N

Flow Rate: 0.2-4.4 GPM

Fluid: Water



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