

## Mount-Anywhere™ Magmeter

Flow lab proof - 0.3% of rate error  
at 1 pipe diameters from the flange

A Mount-Anywhere™ magmeter was installed in Toshiba's flow lab using what would normally be considered a sub-standard piping configuration. The installation had virtually no upstream or downstream straight pipe lengths and a valve was located near the magmeter on the upstream side. (see Fig 1). The tested product was a Toshiba 8" magmeter, Model LF400 series (LF410/LF400). Range: 0 - 8.70ft/s on drinking Water.

Below are the accuracy results for that test. Figure 2 shows two flow tests of the same meter (1st flow and 2nd flow). The flow lab tests proved that the Mount-Anywhere™ magmeter was in spec and exhibited excellent repeatability when mounted in unusual circumstances.



Figure 1.

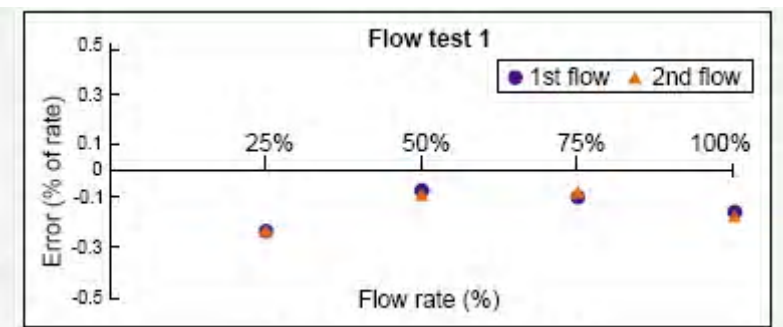
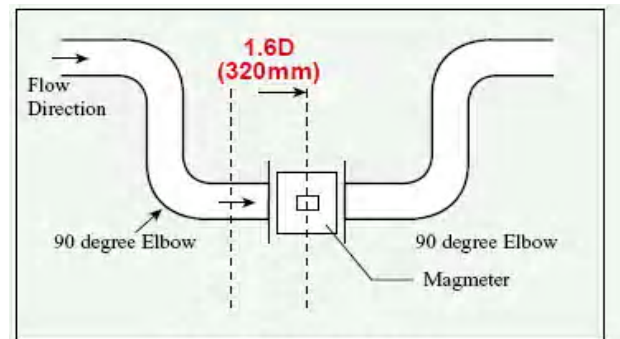


Figure 2. Toshiba flow lab test results



Piping diagram

### Mount-Anywhere™ Technology

The patented Mount-Anywhere™ technology developed exclusively by Toshiba virtually eliminates all flow errors caused by disturbances in the upstream and downstream piping due to elbows, valves, flanges, etc. Even with adequate upstream piping diameters, conditions such as low flow rates, slurries, and process coatings can still cause large flow errors due to a disturbed flow profile. In conventional magnetic flowmeters the area nearest the electrodes have the greatest sensitivity. It is in this very small area of sensitivity that conventional magmeters measure the flow velocity assuming that this small area represents the total flow profile inside the pipe. To ensure accuracy with conventional magmeters, one must ensure that the flowing profile is uniform by adding long lengths of upstream piping. However, as noted earlier long runs of upstream piping can not always guarantee a symmetrical flow profile moving past the electrodes.

### How Toshiba's Mount-Anywhere™ patented technology solves this problem?

To solve this problem Toshiba has arranged the coils around the flow tube in such a way that the characterized magnetic field yields virtually equal contribution to the electrodes anywhere inside the pipe and not just near the electrodes. The Mount-Anywhere™ magmeter averages the total flow profile throughout the inside of the pipe regardless of upstream disturbances. **The result is now you can save thousand of dollars by mounting magmeterx where you want them and not where conventional magmeters have to be mounted.**