

FAQ: Frequently Asked Questions

Q. Where can I use Electromagnetic Flowmeter?

A: The Electromagnetic Flowmeter can be used on any liquid service where the liquid to be measured is having electrical conductivity above minimum threshold level of $10\mu\text{S}/\text{cm}$.

This covers almost all liquids like acids, alkalis, ores, dyes, inorganic liquids & process fluids, edible oils, paper pulp, white and black liquors, milk, fruit juice and pulps etc.

The Hydrocarbons such as Petrochemicals, alcohols etc. are the only exceptions as they have very low electrical conductivity. ($<1\mu\text{S}/\text{cm}$)

Q. What is electrical conductivity and its significance?

A. The electrical conductivity of the liquid is a property which describes its capacity to allow the flow of electrical current through it.

The Significance:

The flow meter works on Faraday's Law of electromagnetic induction. It requires 'a **conductor**' to move in magnetic field to generate electric voltage in it.

The value of electrical conductivity, above which, the flow meter considers the liquid as conducting, is the conductivity threshold value: generally $10\mu\text{S}/\text{cm}$.

Q. Does a change in conductivity affect the performance of the flow meter or a change in the accuracy?

A. No. The change in conductivity does not affect the performance of the flowmeter as long as it is above the minimum required threshold value. ($>10\mu\text{S}/\text{cm}$)

The flow meter output is only dependent on the velocity of fluid to be measured and it does not have any parameter, in its equation of function, except the velocity of liquid.

Q. What is so special about Electromagnetic Flowmeter, that makes it capable of handling such a wide range of fluids?

A. The electromagnetic flow meter by design has no moving parts. This gives the advantage of long life, no pressure loss due to obstruction to the flow and almost nil chance of choking. This makes it the only choice for liquids with solid contents such as

sewage sludge, ores, paper pulp, molasses etc.

It also provides choice of chemically compatible material of construction, for Liner and electrode, the only two parts in contact of the fluid to be measured. They can be selected from Natural rubber to PTFE/CERAMIC/Glass for liner and from SS316 to Platinum for electrodes. Making it useful for services such as concentrated acids, alkalis to paper pulp molasses, ores, sludge, sewage effluent etc.

Q. How do I select a suitable Electromagnetic flow meter?

A. MiFlow has divided all the possible applications in four major categories viz.

1. Water & Waste Water (MiM900W) – for raw and treated water and for effluents, manures and sewage, sludge etc. services for control or billing.
2. Process (MiM900P) – for process liquids like acids, alkalis, pulp, ores, solutions etc.
3. Sanitary (MiM900S) – for liquids of food grade applications like Milk, fruit juice, pulp etc.
4. Insertion (MiM702W) – for bulk Water services in very large pipelines.

A suitable type flow meter, from the above, shall be selected and the details of the flow meter like size and compatible liner and electrodes can be selected referring the link from the specific product page.

Q. How does MiFlow ensure that the product manufactured is meeting customer specifications?

A. MiFlow Meter Systems has its management system conforming to the ISO 9001:2008, in the field of "**Design, Manufacture, Supply, Services, Installation and Commissioning of Flow meters and its spares.**"

Every flow meter manufactured is subjected to MiFlow's strict quality control norms and is finally calibrated at its in-house test lab or at any of the accredited flow meter testing laboratories as per the ISO4185 procedures.

Q. What are the routine maintenance requirements for the Electromagnetic flow meter?

A. The flow meter does not have any moving parts and also has chemically compatible materials of liquid contact, which provides very long trouble free life. In fact the flow meter requires negligible routine maintenance, except for the periodic calibration.

Q. Why MiFlow as preferred brand of Electromagnetic Flowmeter?

A. MiFlow Meter Systems is in field of electromagnetic flow measurement for past several years and has developed, manufactured, installed thousands of Electromagnetic flow meters on wide range of services to the customer satisfaction, like Concentrated Acids (pH 2), strong alkalis (pH 13.5), hardwood paper pulp, Molasses, effluents, cow manure, Fruit pulp, milk and many other process fluids.

It also has a distinction of being the designer of world's largest flow meter of size 120"NB(3000mm). MiFlow has installations on water services (both raw and treated) across the length and breadth of India including the drinking water projects and also regional water supply schemes of Maharashtra.

Finally, being dedicated to the technology, we have the specific expertise in the specific field to keep us ahead on the technology and product design.

MiFlowmeter Systems