

## **Frequently Asked Questions (FAQ) on Water Meters**

### **1) How do I select the size of the water meter?**

Range of operation (flow rate) is specified for each water meter. Water meters should be selected based on the flow rate range expected at the location of installation. It is not depended on the adjoining pipe size.

### **2) What is the measurement accuracy of a water meter?**

The required accuracy of a good water meter is  $\pm 2\%$  in general and  $\pm 5\%$  at very low flow rate range. The exact flow range for a particular water meter depends on the size and class.

### **3) What is the difference between Single jet meters & Multi jet meters?**

Single jet meters make use of only one port to create a jet of water, making the turbine rotate, whereas Multi-jet meters use multiple ports surrounding an internal chamber to create a jet of water against the turbine. Both, single jet and multi-jet meters are widely used in India. Accuracy and flow range requirements are same for single jet and multi jet water meters.

### **4) What are the classes of water meters available in India? What is the difference between these classes?**

Water meters are classified as class A, B, C and D. Class A and B are widely available and used in India. Class B meters are expected to have the capability of measuring at a very low flow rate, compared to class A meters.

### **5) What are the standards available for water meters?**

IS 779, IS 6784, ISO4064 (Three parts), OIML R49 and EEC directives are available for specification, installation and testing.

### **6) What types of end connections are available for water meters?**

Threaded ends with nipples are available up to 50mm water meters. Above 50mm, water meters are generally having flanged end connection.

### **7) What is meant by “domestic” water meter?**

As per Indian standards all meters up to 50mm are called as “domestic” water meters and higher sizes are called “bulk” water meters.

### **8) How do I ensure the quality of water meters?**

The best way to ensure the quality is by screening the meters based on test results. Please go through the Model Approval Program offered by FCRI.

**9) What are the important tests on water meters? How much time will it take?**

Accuracy at different flow rates, pressure tightness, and pressure loss tests are the initial verification or routine tests which is conducted on every meter. Model approval Tests involves prolonged continuous and discontinuous tests mainly to check the durability.

Initial verification test can be completed within a day where as model approval test will take around two months.

**10) Can I replace my old water meter with a new one of the same size from a different manufacturer?**

It is possible, in general. However it is better to check the length due to alternate lengths of the meter permitted in different standards.

**11) What is AMR? What is its significance?**

AMR stands for “Automated Meter Reading”. An attachment is provided on the conventional water meters, to produce electronic output. This electronic output can be transmitted to remote locations through wire or wireless technologies. AMRs are not generally adopted in India. Hence, suitability of the available AMR units in Indian conditions is to be studied.

**12) What will be the approximate life span of a watermeter?**

Life span of a water meter depends on design and field conditions. In the absence of any reliable study, life span can be taken as 5 to 7 years.

**13) How can we repair or maintain water meters in the life span?**

As the spare parts of the meter are not standardized it is advisable to enter into a contract with the manufacturer, for repair and maintenance of the water meters. Most of the utilities enter into maintenance contract with manufacturers during the purchase stage itself.

**14) Why should I Test my meter at FCRI?**

FCRI is a national Institute accredited by NABL, and recognized by Bureau of Indian Standards for testing water meters. FCRI encourages clients to witness the test, making the testing completely transparent.

**15) What will be the testing charges if I adopt MAP and conduct acceptance test of 15mm water meters at FCRI?**

Testing Charge depends on the number of meters procuring/testing. If 10,000 meters are procured, the testing charge will be around 2 % of the cost of the meter. Exact charges may be obtained from Customer care dept of FCRI.

**16) Will the water meters register air?**

Air passage through the meter will be registered in all mechanical type of water meters.