SMITH PUMPS

The SMITH MeaSUREmix units are applied by flow range, and not necessarily by nominal pipe size. Before installation, take the time to make sure the model under consideration has the proper flow range to accommodate the application. *It is very important to confirm the water flow rates. Be absolutely sure that the flow range of the watering system, carrying the injected chemicals, is always within the capacity range of the injector unit, or units, to be installed.* There are four different methods for determining flow rates before installing the injector.

1. METER METHOD.

   If the water supplied to the system flows through a water meter, the flow rate can be obtained easily. Open the irrigation station or system for maximum volume. Read the meter at a specific time, allow the meter to run for a period of minutes, and then read the meter again. For example, assuming the water meter measures in terms of Cubic Feet, it would then be necessary to convert the difference between beginning and ending meter readings into U. S. gallons. The formula for this conversion is:

$$\text{USGPM} = 7.5 \times \frac{\text{ending meter reading} - \text{beginning meter reading}}{\text{minutes of test}}$$

   Note: the answer may be obtained more readily by timing the test for exactly 7.5 minutes. The 7.5 then cancels out in the formula, and the difference between the two readings would then be the U. S. Gallons Per Minute.

2. OPEN CONTAINER METHOD.

   If all water to be treated can diverted through a single outlet, a suitable container of known volume could be used to measure the water flow rate. Simply turn on the flow fully, and time how many minutes are required to fill the container. To obtain the flow rate in USGPM for example, divide the capacity of the tank in USG by the total minutes.

3. CONTROLLED WATER DISTRIBUTION METHOD.

   A pressure gage is required to obtain necessary information required for estimating the water flow rate of a system, or station, with drippers, nozzles, sprinkler heads, etc.. The watering system should be operating fully.
   a. Read and record the pressure gage with the watering system operating fully.
   b. Count and record the number of heads, nozzles, drippers, etc., operating.
   c. Multiply the flow rate per head, dripper, or nozzle at the particular pressure. (Sprinkler head, dripper, or nozzle flow rate information for a given pressure can be obtained from the manufacturer or sales representatives).

4. METHOD IF THE SYSTEM USES A PUMP.

   If a pump is utilized in the system, a pressure gage should be installed in the piping. When the system is operating fully, the pressure indicated on the gage should be read and recorded. The pump manufacturer or his sales representatives can supply information regarding the flow rate of the pump, at the particular pressure indicated.

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SMITH PRECISION PRODUCTS COMPANY
P.O. Box 276, Newbury Park, CA 91319 USA
1299 Lawrence Drive, Newbury Park, CA 91320 USA
Tel.: 805/498-6616 FAX: 805/499-2867
e-mail: info@smithpumps.com **web: www.smithpumps.com**