

VOLUMETRIC WEIRS

For measuring flows in Manholes and Open End Pipes



WEIR SET

(refer to back page for details)



15" WEIR WITH 18" ADAPTER



WEIR WITH BUBBLER TUBE

The most practical, economical instrument for testing new sewer lines - night flow studies of existing lines – free flow from open end pipe.

A VOLUMETRIC calibrated weir is a portable flow measuring device that is used to determine infiltration in newly installed sewer lines, or measure substantial flows in existing lines.

THE THEL-MAR VOLUMETRIC weir is basically a compound weir that incorporates the advantage of a 90° V-notch for measuring small infiltration flow where accuracy is of prime importance. The V-notch section measures from 57 gallons to 3700 gallons per 24 hours, which is the range of normal Acceptance Test Requirements. The rectangular section of the weir is capable of measuring in gallons per day up to 35% of pipe capacity.

A BUBBLE LEVEL is mounted at the top of the weir's face plate for easy visibility. Thel-Mar weirs are calibrated in U.S. GALLONS PER 24 HOURS (METRIC WEIRS CUBIC METERS PER HOUR) in large, easy to read type. Calibration lines are in 2 millimeter increments.

DISCHARGE CALIBRATIONS for the Volumetric Weir were accurately determined in a hydraulic laboratory where manhole conditions were duplicated. Therefore, there are no induced errors by insufficient drop of the nappe or by contractions, velocity of approach, submergency, or drawdown.

RUGGED CONSTRUCTION and noncorroding materials make the Thel-Mar weir extremely reliable. There are no loose parts that require assembly. Installation is quick and positive and the weir requires a minimum of care.

A COMPOUND WEIR offers minimum restriction to flow and is relatively free from becoming clogged by debris from sewage. Thel-Mar weirs can be installed for extended periods of time without accumulation of sediment.

ERRORS IN EXCESS OF 100% exist in other calibrated V-notch weirs. Unlike the Thel-Mar weir these were calibrated by the cone formula.

EASY TO READ FLOW RATE Simply check water level at the face plate. The figure above the line matching the water level gives you the rate of flow in GALLONS PER 24 HOURS (METRIC WEIRS-CUBIC METERS PER HOUR).

BUBBLER FLOW METERS Especially designed for use with Bubbler Flow Meters, all Volumetric Weirs are now available with an attached "Bubbler Tube". These weirs are manufactured with a 1/8 inch O.D. stainless steel tube attached to the right side of the adjustable ring. The bubbler tube protrudes forward approximately two inches from near the top of the ring for easy connection to a line. It runs from there down the inside of the ring to approximately 1 3/8-inch behind and below the V-notch. This bubbler tube does not in any way affect the function of the Volumetric Weir.

INSTALLATION INSTRUCTIONS Prior to installation, the interior edge of the incoming pipe should be cleared of sediment and foreign matter to assure seal of the gasket.

Turn thumb-wheel to extreme right. Place hand through weir opening, with thumb and index finger compress spring. Insert weir into incoming pipe about 1", and release tension from spring. Secure by turning thumb-wheel to left and finger tighten.

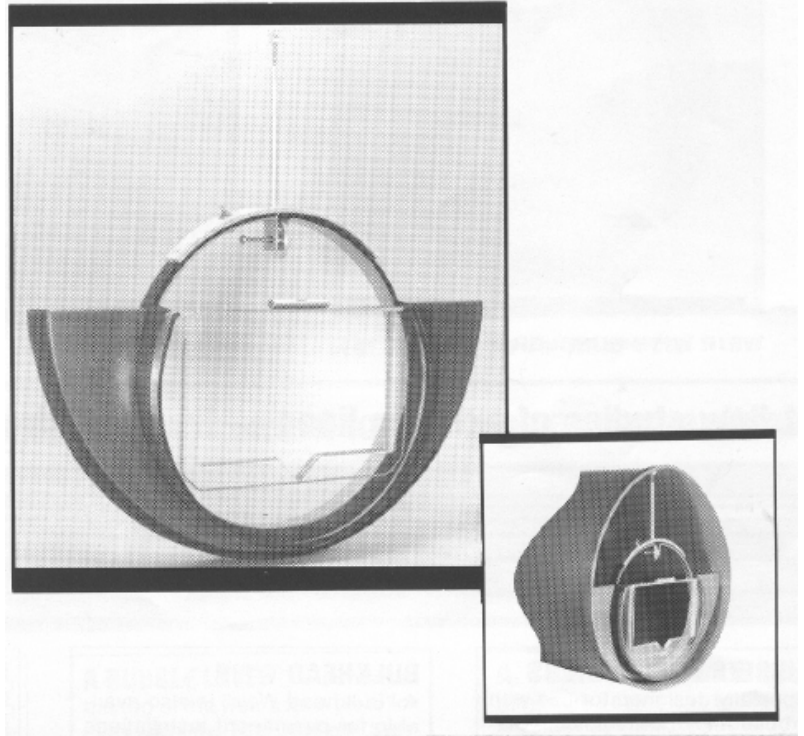
Allow sufficient time for water to back up and behind the weir and establish a uniform flow; five to ten minutes for existing flow to an hour for accurate infiltration readings.

15" WEIR WITH ADAPTOR INSTALLED IN 24" PIPE

Individual Volumetric Weirs are available for 6", 8", 10", 12", 14", 15" and 16" pipe. The 14" weir uses a 12" face plate. Adaptors for 18", 21", 24", 27", 30", 36", 42" and 48" pipe are used in conjunction with the 15" weir.

Volumetric Weirs are also available in a set. Set A consists of 6", 8", 10", 12" and 15" weirs with an 18" adaptor and carrying case with handle and hasp. It measures 19 1/2"W x 19 1/2"D x 7 1/2"H. Set B is similar and designed to be used with Bubbler Flow Meters.

Adaptors are available individually or in a set. Set C consists of 21" through 48" adaptors. No carrying case included.



WEIR CAPACITIES AND HEAD

CAPACITIES*

			HEAD**
6"	57 to 3700 GPD within V-notch,	rectangular to 46,000 GPD	2.8437
8"	57 to 3700 GPD within V-notch,	rectangular to 124,000 GPD	4.0000
10"	57 to 3700 GPD within V-notch,	rectangular to 234,000 GPD	5.1250
12"	57 to 3700 GPD within V-notch,	rectangular to 361,000 GPD	5.8125
14"	57 to 3700 GPD within V-notch,	rectangular to 361,000 GPD	5.8125
15"	57 to 3700 GPD within V-notch,	rectangular to 610,000 GPD	7.3125
16"	57 to 3700 GPD within V-notch,	rectangular to 610,000 GPD	7.3125
Bulkhead Weir	57 to 3700 GPD within V-notch,	rectangular to 610,000 GPD	7.3125

* Calibration lines are in 2 millimeter increments.

** In inches from top of rectangular opening to bottom of V-notch.



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