

Sump Tester

Caldwell Instruments Inc

Caldwell Sump Tester U.S. Patent #6588271



Sump Tester

New Regulations

New regulations are upon us that require all secondary containment systems and sumps to be tested for leaks every three years. For example, systems installed in California after 2001 must be tested upon installation, 6 months after, and then every 3 years. Additionally, all dispenser pans and tank top sumps must be tested. Further, the State of California recommends testing spill buckets on fill risers, and expects to require testing of these in the future.

Complying with these new regulations can be time-consuming and expensive. California has not specified what kind of test must be performed, or what leak rates are allowed – operators have to show that the sumps are functioning to the manufacturer specifications. Most sump manufacturers require a 24-hour hydrostatic test at installation. This can mean long and costly shutdowns of tanks and dispensers.

Faster Testing

Caldwell provides a faster, cheaper alternative. Our new Level Change Indicators are designed to show water level changes on the order of + or – 0.001 inches. This high degree of resolution allows for accurate testing in a minimal amount of time.

For example, if the manufactured specs are ¼ inch in a 24-hour test period, our system can achieve the same accuracy in a 30-minute test. A detection level of 1/8 inch in a 4 hour test (manufacturers spec), can be also be achieved in 30 minutes with a Caldwell Systems Indicator.

Fast test time not only gets your sites up and running faster, it eliminates any problems associated with evaporation. In dry areas of the state, evaporation over a 24-hour period can exceed the leak rate you are trying to detect.

Lower Costs

The low price and simple operation of the Caldwell level Indicator means you can have several indicators running at one time. Get in and out of a site quickly and maximize your profits while minimizing your labor.

The simple design requires no training or electrical hookups.



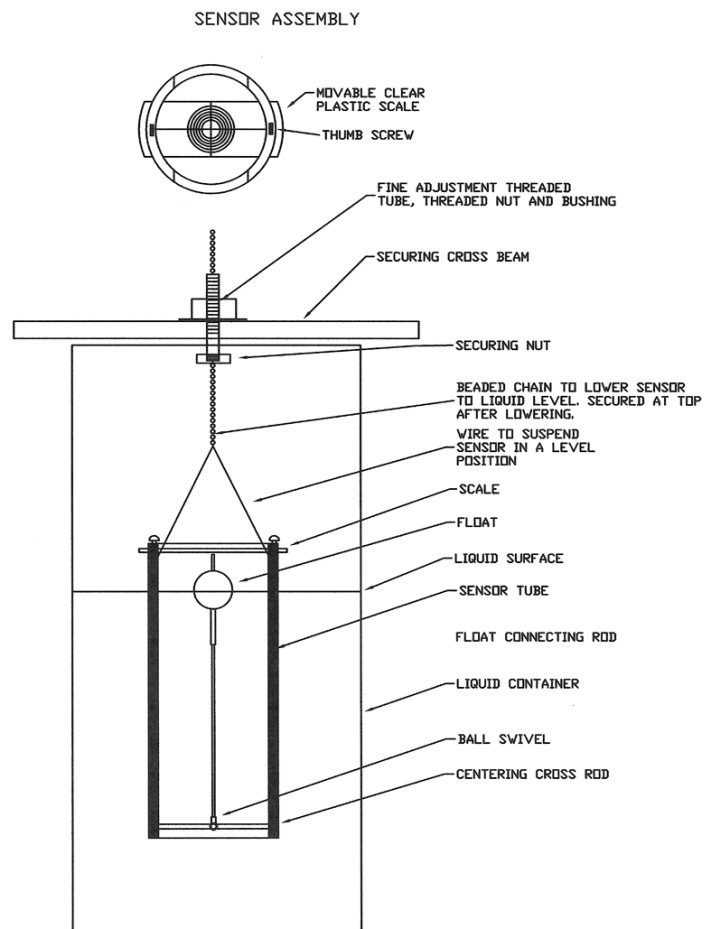
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Principles of Operation

If liquid level is decreasing over time, float indicator will move outward. Level changes from the first circle to the 2nd and 3rd circles represents a level change of 0.01 inches. A change of 1/4 of a circle represents 0.002 inch level change over the time period of the test. Multiply to get the time frame needed (i.e. 24 hour test) and to determine if you meet the manufacturer's specifications. The float movement is non-linear. From the 3rd to the 4th circles and from the 4th to the 5th circles represents a level change of approximately .0075 and .005 inches respectfully. All testing should start at the first circle or second circle. Any movement beyond the next circle in one hour indicates a leak. If the sump is tight, there will be no visible movement of the indicator over the test duration.

The sensor tube and measurement scale should be checked for calibration before starting a new series of tests at a site. Calibration should be done in a container such as a wastebasket filled with water or sump that allows easy access to the sensor tube while it is in the liquid so that the measurement scale can be moved as needed.

Our indicators are mechanical for safe operation.



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