

Measures Submersed Solids Under Water

BinMaster's SmartBob inventory measurement system offers a SmartBob2 SS sensor option, which is a proven solution when the requirement is to measure the level of solid material below a liquid surface, such as in brine interface applications. It can be used in tanks where solid material settles at the bottom of a tank, such as for measuring the level of settled salt, sediment, sand or metals under water. The SmartBob SS is an excellent alternative to relying on sight tubes and can be used in any application where solid material needs to be measured under liquid. Examples include water treatment, wastewater facilities, food processing, petroleum refining, chemical processing, and salt and metal mining.



Accurate Measurements without Climbing Tanks

The SmartBob SS sensor eliminates the need to climb tanks to get measurements. The weighted probe drops through the liquid and when it comes into contact with solid settled material, it retracts and sends a measurement to a SmartBob control console or a PC loaded with eBob software. It also features a 4-20 mA analog output from a console that can record the measurement directly to an existing control system or send data to a PC running a data logging program using RS-485 communications. The SmartBob SS sensor's design includes a standard air purge fitting that can be plumbed to add dry air and help keep the sensor cavity dry. The SmartBob SS is fitted with either a stainless steel, Teflon-jacketed cable or a durable nylon cable with stainless fittings that stands up to corrosive materials.



SmartBob SS

SmartBob SS for Submerged Solids



The SmartBob2 SS for measuring submerged solids is an affordable measurement system that provides the level of solid materials that have settled on the bottom of a tank of liquids. The SmartBob SS sensor mounts on the top of the bin and works like an automated tape measure. The SmartBob sensor operates by dropping a cable with a weighted stainless steel probe that penetrates the liquid and descends to the solid material surface in the tank. When the probe comes into contact with the solid material, it automatically retracts and sends a measurement to either a C-100 control console mounted at ground level or to a personal computer loaded with eBob software. A standard 4-20 analog output can also be used to send data directly to an existing control system from the C-100.

Accurate, Real-Time Measurements

The control console reports the distance to the solid material (headroom), height of the solid material, and percentage the tank is full of solid material. One control console can monitor one bin or can be networked to report information from up to 128 tanks to one console. Sending all information to a single console eliminates the need to climb bins to check tank levels or walking from one bin to the next. Each tank is assigned a number and the tank parameters including the height and diameter for each bin are entered into the console using a push-button key pad. Measurements are taken by selecting the tank to be measured, pressing a button, and the measurement is promptly taken and displayed on the console. The tank height and diameter information as well as the last measurement taken are retained in the console's memory, even in the event of a power loss. The console is contained in an impact resistant enclosure and is installed in a metal electrical box or cabinet.



Solutions for Multiple Tank Operations

If the operation has multiple tanks in multiple locations, BinMaster offers the C-50 analog expansion console to accommodate multiple analog outputs for one up to 120 tanks. The C-50 analog expansion console interfaces with the C-100 control console to provide multiple 4-20 mA outputs, enabling monitoring of multiple tanks equipped with SmartBob SS sensors from a single C-100 console. Another multiple bin monitoring alternative is eBob software which is loaded on a PC and allows for tank measurements to be viewed on a computer screen inside an office. The Windows-compatible software enables viewing of up to 16 tanks at a time and for color-coding of tanks by material or tank location. eBob can be set up to send automated email alerts if tanks get below or above a preset level. eBob software is easy to use and requires no special training or support.

