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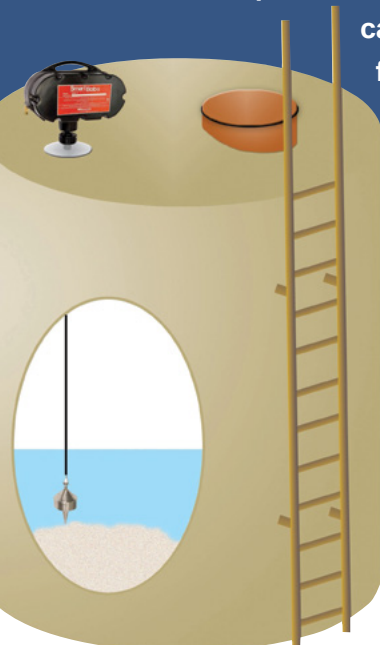
BOB CAN DO THAT!

The **SmartBob** sensor has evolved quite a bit over the past three decades. What hasn't changed about SmartBob is its durability, reliability, and long service life. Working like an automated tape measure, SmartBob eliminates the need for climbing bins, creating a safer and more efficient operation. The measurements from a SmartBob sensor are always accurate and repeatable. With the ability to send level data to a console, computer, or **BinView** in the cloud, it's also very versatile. At the suggestion of our customers, the SmartBob family has grown to include models with options for a variety of diverse applications.

HERE'S TWO OF THE MOST POPULAR

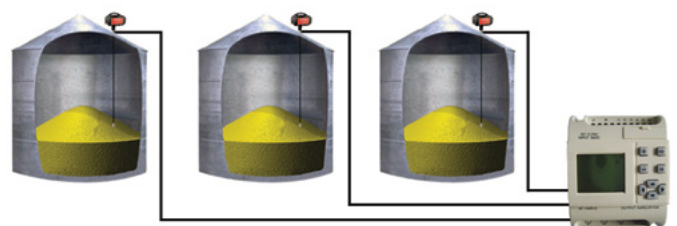
Submersed Solids

The **SmartBob SS** was designed especially for measuring solid material that has settled at the bottom of a tank such as salt, chemicals, minerals, or metals. It is designed with a 3" standpipe for ease of installation on top of the tank. Plus, it has a stainless steel cable and weighted Bob that stands up to corrosive materials. A SureDrop cap prevents the weight from being retracted into the pipe and protects the device from unwanted material entering the pipe. It is popular in applications such as brine tanks, water and wastewater treatment, food processing, chemical processing, and salt or metal mining.



Analog Output

The **SmartBob A0** is for customers that want a direct 4-20 mA analog output to run to a PLC versus using a console or software for getting measurements. BinMaster engineers built a push-button interface into the SmartBob circuitry to set up the interval timer, units of measure, 4 mA and 20 mA drop distances, maximum drop distance, and configure the relays. There are two configurable relay outputs that can be used to alert to measurement status or high, low, or error alarms. Once programmed, the parameters for the bin are saved in the non-volatile memory of the sensor. An external start input can be used to take a measurement immediately, should one be needed.



To view a complete lineup of SmartBob models and accessories visit www.binmaster.com.



EXPLORE THE CAPACITANCE PROBE

BinMaster designs and manufactures [capacitance probes](#). With in-house engineering and custom manufacturing, BinMaster can tailor your probe with options that fit your application.

We make probes in a variety of standard and custom lengths and materials – Stainless Steel, Delrin, Teflon-shielded, unshielded, and lagged. Plus, we offer mounting flanges and fittings to make your installation a success with one simple call.

Check out BinMaster's probes!



Bendable Probes: Fits in tight spaces or in vessels with obstructions. Great for mixers and small containers in processing operations.

Hazardous Locations: Certified for challenging environments where there is an explosion risk.

Sanitary Applications: Meets rigorous USDA, FDA and 3-A material and design standards in food, dairy or pharmaceutical operations.

Remote Electronics: Electronics mount up to 75 feet away for high temp, high vibration or hazardous environments.

Flexible Probes: Won't get damaged by material in custom lengths up to 35'.

Mount in a standoff pipe or nozzle.

Flush Mounting: A flat-faced device with "no probe intrusion" for tight spaces or where material flow might damage a probe.

Auto Calibration: Looking for easy? Here's a probe with simple and automatic calibration without opening the cover.

Compact Probes: For level indication in small spaces or for plugged chute detection in tanks, bins, silos chutes, conveyors pipes or hoppers.



Go with the Flow! Prevent Cross Contamination

The [Flow Detect 2000](#) is a flow/no flow detector for solids and powders. It prevents cross contamination by ensuring flow has stopped before introducing a new material. Its compact, single-piece design is easy to install and doesn't require a separate controller. Use it in transition points in:

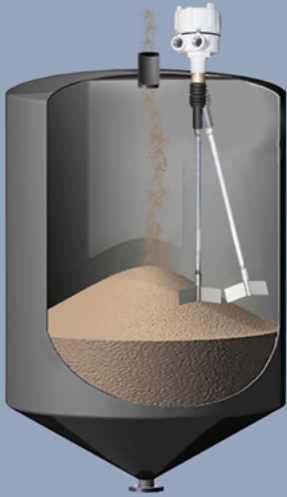
- Gravity chutes
- Pipelines
- Ducts
- Feeders
- Bucket elevators
- Gravity spouts
- Gravity feeders
- Distributors
- Mechanical conveyors
- Pneumatic conveyors

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LEARN MORE AT BINMASTER.COM

800-278-4241 or info@binmaster.com



Mercury-Free Tilt Switch

Affordable level detection that's innovative, patent-pending and mercury-free. Mounted on top of the tank, it alerts to high levels when the switch is tilted 15 degrees.

- Used in powders and bulk solids
- Bulk density of at least 15 lb./ft.³
- Custom lengths from 1 to 8 feet
- Available with a paddle or sphere
- Installs in 1-1/4" NPT process connection

CONTACT US:
www.binmaster.com
 1-800-278-4241

Your Data is Served...by BinView

BinView is the easiest way to get your tank level data anywhere and anytime you have access to the Internet. It's compatible with our advanced sensor technology to remotely monitor storage tanks and silos in a variety of applications that include feed, grain, cement, chemicals, and petroleum. With **BinView**, you can monitor all your storage at one location or corporate wide.

- Easy-to-use and read graphical interface
- At-a-glance overview of your bins
- One click access to bin details
- Current reading reports for any or all bins on site
- Information in distance to product, percentage full or bushels



Special User Features You'll Appreciate:

- Sort your data by material, location or alert status
- Easily sortable columns for customized data display
- Get alerts to your email or a text message
- Site access from any mobile device, tablet or computer
- Set automated high and low level alerts
- Historical reports for any tank over a specified time frame
- Export reports for analysis or sharing



Shannon Allen,
 BinView
 Developer

Scanning the Globe for Better Accuracy

What type of accuracy can customers expect?

We routinely see volume accuracy in the 1-3% of capacity range when the technology is properly applied. By properly applied, I'm specifically referring to following the recommended sensor mounting location and/or using the recommended number of sensors if you have a multi-scanner system.



What's the difference in the [models](#)?

The models differ in the beam angle employed and the amount of information conveyed to the [3DVision software](#). The beam angle ranges from 15° for the RL model, 30° for the S, and 70° for the M, MV, and ML/MVL multi-scanner models. The 3DVision software reports the average level and estimated volume % for the RL and S. The M model and ML multi-scanner report the average level, minimum level, maximum level, and the volume in % full. The MV and MVL produce the visual representation of the material in addition to providing the average level, minimum level, maximum level, and volume in % full.

Why has the [ethanol industry](#) embraced this technology?

First off, corn, DDGS, and milo are extremely dusty materials. [The 3DLevelScanner's](#) low-frequency acoustics penetrate the airborne dust. The vibration that generates the acoustics coupled with the non-stick transducer membranes help keep the transducer clean nearly eliminating maintenance trips to the top of the bins. The dust and material buildup has been a major problem for other non-contact technologies. Secondly, the majority of the bins and silos in the industry are very large in diameter and often have multiple fill and empty locations. This leads to irregular and unpredictable material topography; therefore, a single point level measurement doesn't tell you much about the balance of the material surface. The 3DLevelScanner's multiple-point mapping capability takes the peaks and valleys into account to provide a true volume measurement.

Will 3D work wood pellets and woody biomass?

Absolutely. It's the only non-contact sensor that performs reliably in [wood applications](#). The dust is problematic for laser and ultrasonic,

while the low dielectric constant of wood leads to instability for radar. Moreover, woody biomass tends to flow somewhat poorly leading to sidewall buildup and other irregular topography which can be mapped by the 3DLevelScanner.

What do you recommend in [resin silos](#)?

It depends on the diameter and height of the silos and, of course, the preference of the customer. The majority of the silos we see in plastics range from 10-14' in diameter and 40-60' tall. The "S" model is a great option for these silos as it provides a close volume estimate at an economical price. The "M" and "MV" are also used when the end user sees value in the maximum and minimum levels and/or the visualization feature. For those applications where close volume isn't critical or the budget is limited, the low cost "[RL](#)" model is a great option if the goal is a non-contact solution.

How has 3D performed in [mineral processing](#)?

This is a sector where the bin roofs look like a non-contact level measurement graveyard. The cause of most failures is the airborne dust and material buildup on the sensor since it is such a harsh environment. We generally recommend the [Teflon coated transducer](#) for the 3DLevelScanner as many of the materials are moist and sticky.

What about reflective materials like [frack sand](#)?

This is an application we've seen a lot of in the past five years due to the tremendous growth of the industry. Traditionally, this has been a tough one for other non-contact technologies for several reasons; dust, the high angle of repose, and the shape of the sand particle itself. The [3DLevelScanner](#) has performed well in silica sand applications in general. The need for higher accuracy really lends itself to the multiple-point mapping technology.



Mike Mossage, product manager, discusses the 3DLevelScanner

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