

# The Insider

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...because it's what's inside that counts



## Console, Computer, Control Panel or the Cloud?

*How do you like your level alerts?*

### Say Hello to Bob and Goodbye to Tape Measures

The SmartBob sensor automates the tape measure, eliminating the safety risk and the hassle of climbing bins to take manual measurements. It works by dropping a weight to the material surface, immediately retracting, and then calculating the distance to the material surface. That's why some people refer to this type of solids level sensor as a yo-yo. Bobs are very accurate, always measure in the same spot, are highly reliable and virtually maintenance free. And, you've got a choice of ways to get your level data.

### Convenient Console Consolidates Bin levels in One Place

A console mounted at ground level or in an office is a simple way to monitor up to 128 bins at a single location, just by pushing buttons. It's an affordable way for any facility that has one or more SmartBob sensors to monitor the level of all of the bins without walking from bin-to-bin. SmartBobs are programmed to take measurements in scheduled time intervals, say every few hours. The console will store the measurement data for the last measurement taken, or by pushing a button a current measurement can be initiated and quickly reported back to the console.

To set up the console, each bin is assigned a name or number and its shape, dimensions and estimated bulk density of the material being measured are entered in the console. When a measurement is taken, the distance to the product (referred to as headroom), percentage full, and estimated weight are displayed. All of the bin information, the last measurement data and all of the user settings are saved in the console's memory, so you don't need to reprogram in the event of a power loss. There is also a Modbus compatible model of the console, if your facility utilizes the Modbus platform.



*The C-100 console provides centralized reporting for up to 128 bins.*



*The SmartBob sensor works like an automated tape measure and eliminates the needs for climbing bins to check levels.*

**BINMASTER**

PO Box 29709  
Lincoln, NE 68529  
800.278.4241  
402.434.9102  
402.434.9133 FAX  
www.binmaster.com



*eBob software reports bin levels to a PC in the office.*

### Measurements without Leaving the Office with eBob Software

Another alternative for getting data from your SmartBob sensors is eBob inventory management software. It allows for monitoring up to 100 vessels without manually checking levels. Installed on your network, it allows you to access your bin information on your LAN, WAN or VPN. It gives authorized users access to the bin level measurement data at every site on your network and allows them to initiate a current level measurement reading in real time.

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# Console, Computer, Control Panel or the Cloud?

eBob allows you to display multiple vessels on a single screen for a quick overview of your inventory. You can zoom in on data for a single vessel, or choose to view only a select group of vessels, or all vessels, dependent on your need. Each vessel can be programmed with high or low level alerts to get advanced warning of potential overfills or running empty. These alerts can be sent via email to you or other individuals who need to know the status.

Much like a console, using eBob starts with entering your bin data, assigning each bin a name and shape, dimensions, and the estimated bulk density in pounds per cubic foot (lb./ft.<sup>3</sup>) of the material being measured. eBob will display the name of the vessel, the material it contains, the height of the material (or headroom if desired), estimated volume and weight, and the status of the sensor. You can also ask for a current measurement just by clicking a button.

With eBob you also manage who has access to the software and the data. eBob viewer software allows users to view the bin data and reports, while limiting control for adding and deleting bins and their parameters to an administrator. Unlike a simple console, eBob also allows you to generate historical reports. Your measurement history and all of your system information is stored in a SQL database, either locally on a host PC or on your corporate server to ensure everyone is looking at the same data.

## Best of Both Worlds – eBob and a Console

It's fairly common for operations to have both eBob and a console at a single operation. A console on the ground is great for real-time level data when you're loading or unloading bins, railcars, trucks or ships. eBob software offers the same real-time reporting, but from inside the office and can be shared with anyone in your company that needs the information. Purchasing, logistics, finance, operations, or maintenance crews can get to the data they need, when they need it. eBob also has a multi-site option where users can log in and view any site in an operation.

## Accurate Level and Volume Data with 3D

The 3DLevelScanner has revolutionized inventory management in bins, tanks, and silos by measuring multiple points across the material surface and then providing both level and volume data. The non-contact, dust-penetrating sensor has made it possible to provide a high level of inventory accuracy for materials that tend to pile irregularly or are prone to buildup, such as powders and solids that tend not to flow freely. Plus, 3D scanners are ideal for very large vessels or vessels with multiple filling and emptying points where surface irregularities are prone to exist.

## Level, Volume, and Optional 3D Visualization

3D scanners are like data on steroids when it comes to reporting. What data you get is dependent on the model of scanner you're using. It ranges from highly accurate level data with the RL



*3DLevelScanners penetrate dust and provide a 3D visual of contents.*

to getting minimum, maximum and average levels plus a 3D visualization of the material topography with the MV. With scanners, the software is loaded on a host PC and available to users via the LAN, WAN or VPN. There are no third party applications or data access fees. The information is avail-

able 24/7 and is stored in a centralized database, so all users and departments are working from the same data.

The software is compatible with all models of the scanner and a mix of models can peacefully coexist on the network. With the MultiVision version of the 3D scanner software, users can view all bins at one time, without having to open a new window for each bin. Users can easily view summary information for all bins at a glance, or focus only on bins for a particular material or location. By clicking on a single bin, say one with an alert, the user gets much more detailed information about that bin and can view its 3D visual in the case an MV or MVL model is in use.

The software allows for setting alerts when bin levels are low and may need replenishment, or when bins are reaching capacity. The software allows users to customize their data view, so they only see the information that is relevant to them. With real-time data and historical reporting available at all times, MultiVision software can

help operations improve their productivity, maximize their purchasing and logistics activities, and reduce inventory, safety stock and operating costs.

Access to the software is managed by an administrator at your company, who provides access to the data to selected users and gives them each a unique user ID and password. The administrator also controls



*MultiVision software lets you monitor every bin in your operation.*

Model RL	Model S	Model M	Model MV
Measures in a narrow beam directly below the scanner	Measures multiple points in a 30 degree beam angle	Measures multiple points in a wider 70 degree beam angle	Measures in a 70 degree beam angle and also creates visualization of material
Very reliable level data in high levels of dust	Average level based upon multiple points and a volume estimation	Minimum, maximum and average levels and very accurate volume	All of the capabilities of Model M with mapping and visualization graphics tools

what type of data each user is permitted to view. As historical data is stored in a central location on the network, reports can be generated for different bins, for varying time intervals, and analyzed by production and purchasing personnel to optimize inventory levels.

## Anywhere, Anytime Data Access from the Cloud with BinView

If you have vessels containing both (or either) solids or liquids in multiple locations and want your data anywhere, anytime you have an Internet connection, BinView may be the answer to your data



*BinView serves level data to any device with an Internet connection.*

question. This Web-based solution allows you to log onto a secure Web site, enter your credentials, and then select the location and vessels you want to monitor. network gets the data to a gateway which sends it to the Cloud to be served to any device that has a connection to the Internet. BinView gives you real-time access and 24/7 monitoring. Automated alerts can be set for high and low level thresholds, with the data being sent to your email or cell phone when bin conditions meet critical levels.

BinView can be used with SmartBob2, SmartBob TS-1, SmartSonic ultrasonic or Smart-Wave radar sensors. The sensors are mounted on each vessel and a wireless or wired data Using a simple and intuitive interface, BinView is set up by your administrator. Each location and vessel is identified and specific information regarding vessel size, material, bulk density and alert information is added to the system. The administrator will grant access to authorized users and establish their viewing privileges. Users can also generate historical reports dependent on their role and data needs to perform their job. For example, a purchasing agent may

want to look at historical data for use of a particular material to know when to make the next purchase. Another benefit of BinView is that it is in the Cloud, so you can allow limited data access to suppliers of designated materials and give them a role in the replenishment or hauling process.

## Alerts for “Point” Level Indicators

Although rotaries, capacitance, probes, vibrating rods and pressure switches all use different technologies for level



detection, what they have in common is they all alert when material reaches a certain “point” in the bin, tank, silo or hopper. They are commonly used for high, mid or low level alerts to prevent overflowing or running out of material. When a high or low level is triggered, it’s very common for a horn to be sounded or a strobe light to be activated to let you know that there’s an alarm status.

## Alarm Panels Tell You “Which Bin” and “What Alert”

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It consolidates information from multiple level indicators at a convenient centralized location, eliminating the need to manually inspect individual vessel levels and lets you know for sure which bin triggered which alert. It is available with four to 24 vessel level indicator stations, making it capable of monitoring high and low status for two to 12 separate vessels from a single panel. An alarm panel can also be configured for more than two readings from a single vessel, such



as to add a partially full status if additional level indicators are mounted at other points on the vessel.

*Point level alarm panels alert to high and low levels for each bin.*

# **BINMASTER**

## **Bin Level Sensor**

**RL** for Reliable Levels

### **New! BinMaster RL for Reliable Level Measurement in Dusty Environments**

- Dust-penetrating, non-contact technology performs reliably and consistently over time

- Acoustics-based, accurate level measurement in tough environments where other sensors fail
- Works in powdered and solid materials of all types, including low dielectric materials
- Self-cleaning, minimal-maintenance sensor doesn't require air purge for cleaning

## **BINMASTER LEVEL CONTROLS**

**800-278-4241 or [info@binmaster.com](mailto:info@binmaster.com)**

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# **BINMASTER**

## **Got flow?**

## **Now you'll know!**



## **Single-Piece Flow/No Flow Sensor for Solids**



- Compact, single-piece design eliminates separate controller
- Detects flow of solids, granules, pellets, meals & powders
- Affordable sensor uses reliable microwave Doppler technology
- For pneumatic chutes, feeders, pipelines, conveyor belts & bucket elevators
- Prevents cross contamination of ingredients

# **BINMASTER LEVEL CONTROLS**

**+1 402 434 9102 • [www.binmaster.com](http://www.binmaster.com) • [info@binmaster.com](mailto:info@binmaster.com)**

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