

# BinMaster Level Controls



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## SmartBob2 Inventory Management System

The SmartBob2 remote is the core component of a proven, reliable level measurement system for solids, powders, liquids or slurries using cable-based, dust-penetrating sensor technology. When combined with its powerful Windows-based eBob software program installed on a personal computer or remote push-button control consoles, SmartBob2 offers the strongest and smartest cable-based inventory measurement system on the market today – with the ability to manage from one up to 120 bins of heights up to 180 feet.



## SmartBob-TS1 Small Bin Sensor

The SmartBob-TS1 sensor is a cable-based, continuous level measurement sensor for bins up to 60 feet tall. The compact, rugged device weighs less than 10 pounds and is immune to airborne dust and filling noise that can interfere with other continuous level devices. Compatible with eBob software and consoles from BinMaster's SmartBob inventory tracking system, the SmartBob-TS1 is designed to reliably measure powders, granules, pellets, plastic resins, and dry bulk solids as well as liquids in smaller bins, tanks and silos.



## Non-Contact Ultrasonic & Pulse Radar

SmartSonic is an ultrasonic device designed for continuous, non-contact level measuring and monitoring of tanks, bins and silos. Its transmitter features high efficiency, narrow beam design technology using a wide frequency bandwidth to enhance operation in difficult applications, varying temperatures and harsh environments. SmartWave is a low-noise pulse radar transmitter for distances up to 100 feet. A display console, compatible with both devices, can be used for remote indication of bin levels for up to five bins.



## 3DLevelScanner Multiple-Point Measurement

BinMaster's 3DLevelScanner is a non-contact, dust-penetrating bin volume measurement system that uses patented, acoustics-based technology to measure bin contents at multiple points to determine the volume of material in the bin. Its 3DLevel Manager software sends detailed log reports to a personal computer for easy remote monitoring, with advanced models featuring optional surface mapping capabilities. It offers very low maintenance and is self-cleaning, making it ideal for high-dust environments.



## PROCAP Series Capacitance Probes

PROCAP capacitance probes offer interference-free, fail-safe operation and "Quick-Set" calibration. Working far below the RF level of 9 KHz at 6 KHz – PROCAP will not interfere with two-way radios or other equipment operating in the radio spectrum. Optional Class I and II hazardous location ratings, remote electronics and flush-mount designs combined with a wide assortment of probes and extensions make these capacitance probes appropriate for a variety of challenging applications in solid, liquid and slurry materials.



## Single Blade Vibrating Rods

With a unique single-rod probe design and a sword-shaped blade that prevents bridging of material, BinMaster vibrating rods are superior to typical "tuning fork" designs by allowing material to easily flow by, preventing buildup on the blade. BinMaster's standard 7-inch piezoelectric driven vibration type point level switch is suitable for both top and side mount applications, while rigid extended models can be custom built up to 13 feet of either galvanized or stainless steel, dependent on the application.



## Reliable Rotary Level Controls

Rotary level indicators are proven, widely used devices for point level detection and suitable for a wide range of powder and bulk solid materials. BinMaster rotaries feature a specialized motor design with "de-energized" operation, shutting down the motor when material is present, prolonging motor life and saving energy. A triple-thread, screw-off lid offers easy access to components and dual-conduit entries allow for simple installation. With options like "fail-safe" protection alerting to loss of power and models for hazardous locations, BinMaster rotaries are best-in-class for the industry.



## Basic Point Level Diaphragm Switch

A diaphragm switch provides simple, low-cost, automatic level indication of free flowing dry materials such as grain, feed, seed and other granular or pelleted materials. It operates by sensing material pressing against the diaphragm and activating a visual or audible alarm to start or stop a process or alert to high, medium or low levels in bins. BinMaster offers models for hazardous and non-hazardous environments, internal or external mounting, and either neoprene or silicone diaphragm covers.



## Tilt Switch High Level Indication

The BinMaster tilt switch is a versatile, cost-effective level indicator that can be used to alert to high levels, clogged chutes or used as a load sensor in a wide variety of applications and materials. The tilt switch is installed in a bin, or over an open pile or conveyor using a wire rope, chain or other flexible hanger. When material rises and the device is tilted at least 15 degrees, a steel ball inside of the device activates a microswitch, alerting the user to a high level or clogged status.



## Dust Detect Emissions Monitoring

BinMaster's single device dust detector is designed to continuously monitor the flow of particulate emissions from small stacks or other emission points being passed through a filter within an air filtration system. It easily installs in the exhaust ductwork and can be used in conjunction with various types of bag, ceramic, cartridge or cyclone filters. Its probe is designed to recognize abnormal particulate levels outside user-defined preset parameters, initiating an alarm when changes in emissions exceed these levels.



## Flow/No Flow Detection for Solids

Appropriate for solids or powders, BinMaster's flow detect system alerts users if the flow status has changed, power is lost, or communication is interrupted. This system consists of a remote sensor probe mounted in a pneumatic pipeline, gravity chute or feeder and a control console mounted in an area accessible to users. The non-intrusive sensor probe is an industrial grade instrument that senses flow / no-flow conditions using Doppler technology (microwave) to provide highly reliable and sensitive motion detection.



## Airbrator Combines Aeration & Vibration

Airbrator is a very effective flow aid for many types of difficult dry materials such as fly ash, cement, flour, lime, sand and salt. Using a combination of both aeration and vibration, its special self-cleaning design creates a vibration as the air flows between the pad's boot and the bin wall. Airbrator is appropriate for use in any type of bin or silo including food grade applications. It is extremely economical, quite easy to install, and does not require specific air pressure for operation.



## Guided Wave Radar

The BinMaster GWR-1000 level sensor measures powders, bulk solids and liquids in vessels up to 78' tall. It provides highly accurate, continuous level measurement utilizing time domain reflectometry (TDR) to measure the distance, level and volume of material contained in bins, tanks and silos. It performs reliably and is immune to dust, humidity, temperature, pressure and bulk density changes as well as noise that might be present when filling or emptying the vessel.

## PRODUCT SELECTION CHART

Point Level Indicators

Continuous Level

Flow &amp; Dust



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PROCAP I & II Cap Probe	PRO Remote Cap Probe	PROCAP I & II FL Cap Probe	PRO HTRC 20 Cap Probe	CompactPRO Cap Probe	BMRX Rotary	Maxima+ Rotary	VR-21 Vibrating Rod	VR-41 Vibrating Rod	CVR-600 Vibrating Rod	SHT 120 Vibrating Rod	Diaphragm Switch	Tilt Switch	SmartBob 2	SmartBob - TS1	GWR-1000 Guided Wave Radar	3D Level Scanner	SmartSonic	SmartWave	Flow Detect 1000	Dust Detect 1000	BM-30 LGX Part Monitor
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## Material

Powder	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	✓	✓	✓
Granular	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	*	✓	✓	✓
Slurry	✓	✓	✓	✓	*	*	*						✓	✓	✓		✓	✓			
Liquid	✓	✓	✓	✓	✓		*	*				✓	✓	✓		✓	✓				

## Material Density

Low	*	*	*	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	✓		✓	✓	✓
High	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## Material Moisture

Low	*	*	*	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
High	✓	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓	✓	✓		✓	✓

## Temperature

High		✓		✓		✓				✓			✓		✓						✓
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## Pressure

Atmospheric	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Low	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓
Medium	✓	✓	✓	✓				✓	✓	✓		✓	✓		✓	✓					

## Vibration

Low	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓
High		✓		✓		✓					✓	✓	✓		✓						

## Material Coating

Minimal	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓		✓
Heavy Build Up		✓		✓								✓	✓	✓		✓		✓	✓		✓

## Corrosive

Low	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓
High	✓	✓	✓	✓	✓			✓	✓	✓	✓				✓	✓	✓	✓			✓

## Installation

Top Mounted	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Side Mounted	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓							✓	✓	✓	✓

## Atmosphere

Dust	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓	✓	✓
Steam							✓		✓	✓		✓	✓		✓			✓			
Vapor	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓			✓	✓		✓

✓ - Applicable

\* - Consult Factory