

Taking Control ...To A

HIGHER LEVEL

SMARTBOB AUTOMATES BIN INVENTORY AT FARMERS COOP ELEVATOR

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Farmers Coop Elevator in Plymouth, NE.

Measuring inventory is a dusty, dangerous, seven-days-a-week job; nevertheless it has to be done.

Taking a slow one-man elevator or climbing a ladder to the top of silos and dropping a weighted tape measure through an open manhole is how it was done for many years at the Plymouth Farmers Coop Elevator.

"When I first approached management about putting in a SmartBob system they were not real interested in spending the money," said Mike Frederick, elevator operator.

There are eleven grain silos at the Plymouth Farmers Coop Elevator ranging in height from 66 to 140 feet. Monitoring the level in this application presents a variety of challenges.

Not any more! They now get reliable measurements instantly with a push of a button. "Now that we've had it in operation for a year management can see all the time we save with the system and they couldn't be happier," announced Frederick.

General requirements for the inventory system include four absolutely essential capabilities:

1. Reliably measure all ingredients in very dusty, tall silos;
2. Operate reliably in the extreme heat and cold of Nebraska weather;
3. Measure accurately while the silos are filling or emptying;

4. Operate all 11 silos with a single control console.

In this difficult application, SmartBob by BinMaster proves to be the very best choice when compared to competing cable-based sensors and technologies, such as ultrasonic, radar, and lightbeam, that are adversely affected by long distances and dust.

Measurements are taken at the elevator control room with an single SBC push-button console. This allows the operators to simply choose any of

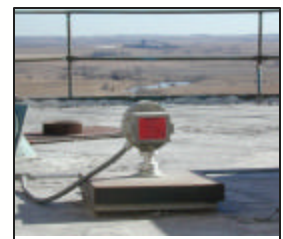
the 11 silos and instantly retrieve measurements. The SBC console can control up to 30 SBR II remotes and has an LCD readout that includes amount of product, distance to the product, and percent full.



SBC Push Button Console

The quick response time of the SmartBob remote is important to the Plymouth Coop Elevator because it enables active monitoring of all its bins. For instance, when a train comes rolling into the Plymouth Farmers Coop, they don't have time to investigate which silos have the right amount of material. They need to be able to quickly retrieve the inventory levels so the operators can instantly determine where to unload the material. Also, during harvest when trucks are lined-up to unload, they can determine without delay which silo has the capacity to hold the incoming grain.

"I believe a lot more elevators would be putting in SmartBob systems if they knew it existed," stated Frederick.



SmartBob Remote on 140 ft. Concrete Silo



There is nothing remotely like it!





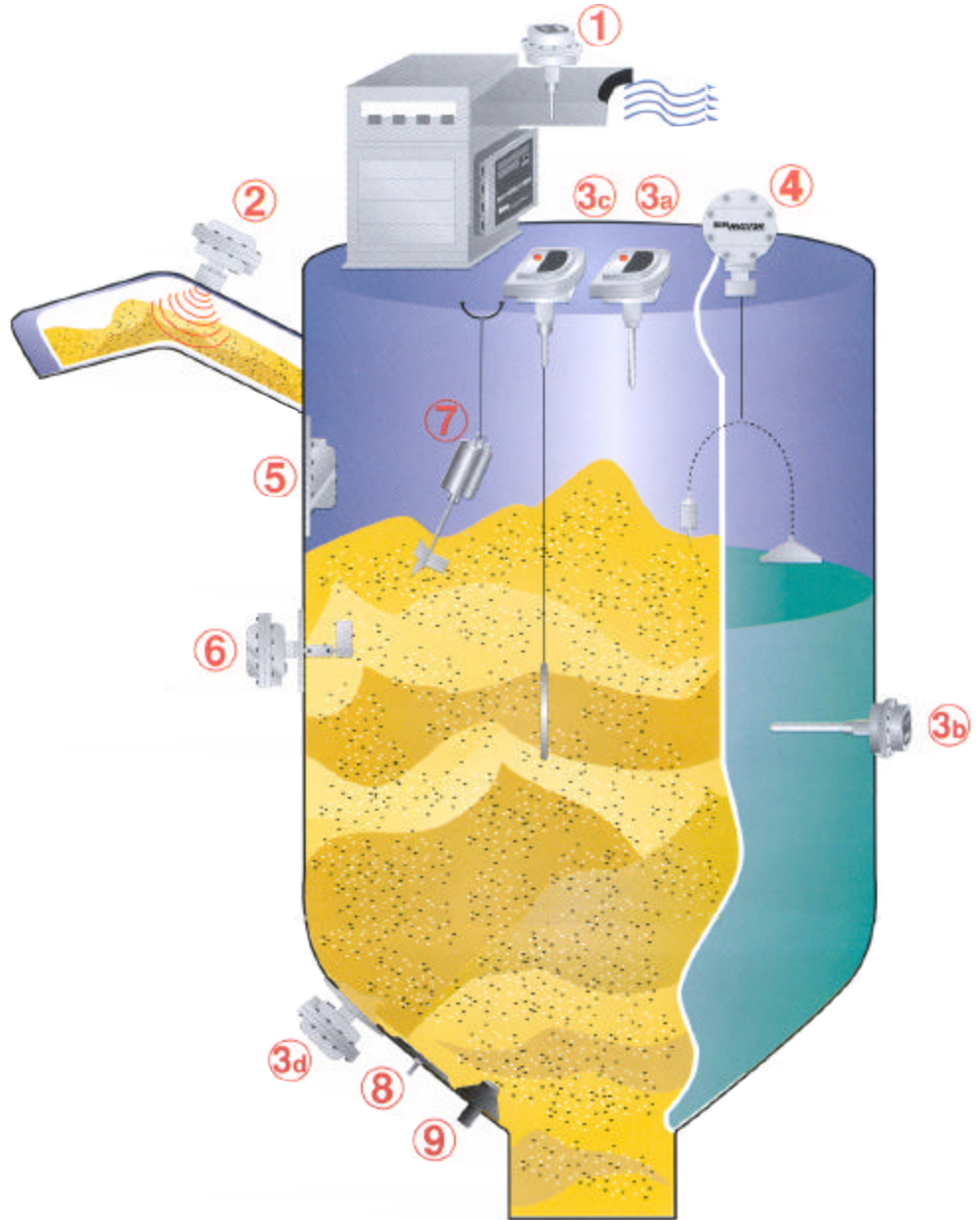
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2. Flow Detect 1000

Let microwave technology sense flow/no-flow conditions of solids and powders in pneumatic pipelines, gravity chutes, and feeders. A variety of mounting options available.



3. Capacitance Sensors a, b, c & d

Reliable point level detection for solids and liquids with no plant interference from RF signals, “quick-set” calibration, and a variety of probe options to fit your application.

a. **Standard PRO I**—This capacitance sensor features a brightly illuminated LED status indicator. The LED allows you to visually determine the status of the sensor without having to remove the cover.



b. **Standard PRO III X**—A very reliable and economical probe. It was designed to be a very low cost yet versatile probe. Works in bulk solids, powders, slurries, and liquids. It has a rugged solid 5/8” dia. 316 SS probe.



c. **Flexible Extension Probe**— The flexible cable extension was designed for high, mid, or low level detection when it is necessary to top-mount. The flexible extension is also used in materials that might damage a rigid probe. Maximum length of cable is 35’.



d. **Flush Mounted Shielded Probe**— This probe mounts flush on a vessel wall, conveyor housing, or chute. The no-probe intrusion design is for space constraint areas or applications where material flow or bridging may damage standard probes.



4. SmartBob II System

This is the strongest and smartest inventory measurement system on the market. The new, robust design will provide years of maintenance-free service in vessels up to 180 feet. And, airborne dust, steam, vapors, temperature changes, or material densities pose no problem to SmartBob II. This system is capable of measuring all your liquid, large granular, or powder and dry bulk solid applications.



5. Diaphragm Switch

Provides automatic point level indication of free flowing dry materials in high or low level applications. They are designed for use in internal, external and explosion proof installations. Can be wired to activate a visual or audible alarm or stop/start a process.



6. Rotary Level Controls

For high, mid, and low level detection. Rotating paddle indicates the presence of material. Motor de-energizes to protect against burn-out. For use in dry solids applications. Available with CSA/UL approved for ordinary or hazardous locations. Six models, different paddle options, and shaft extensions available. Can be top or side mounted.



7. Tilt Switch

This is a low-cost indicator for a wide variety of applications. Use it to detect high levels of large, heavy materials in tanks, bin, or silos. Or install it as a plug detector in chutes. It is equally suited as a load sensor when positioned over a conveyor belt or open piles. When tilted to 15°, a large steel ball inside shifts position, actuating a microswitch.



8. Air Pad

Directs low pressure air along a bin wall to assure continuous and even flow of product in a bin.



9. Aerbrators

Combine aeration and vibration to solve even the most difficult flow applications.



Why Make Managing Inventory This Difficult



When It Can Be This Easy



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