



THE SCOOP

VOLUME 2 ISSUE 2 SUMMER 2002

"Bucket Elevators"... Exposing some myths.

Bucket Elevators are often looked upon as a "Black Art". They are frequently troublesome and rarely seem to provide the promised capacity, and if the elevated material specifications change, it's a whole new bag of tricks.

However, believe it or not, Bucket Elevators do conform to the laws of science and to known physical characteristics. The principle forces involved here are Gravity and Centrifugal Force and, to a lesser degree, coefficients of friction and velocity. All of these parameters are quantifiable.

There are two principles of operation for Bucket Elevators:

Gravity Discharge

After rounding the head pulley or sprocket, gravity acts on the material in the bucket causing it to discharge, or fall out.

These are low velocity Bucket Elevators most commonly used for friable or aerable materials and can be Chain & Bucket or Belt & Bucket designs.

Centrifugal Discharge*

During rounding, the head pulley centrifugal force overcomes gravity, friction of the material on the bucket surface and the buckets' fronts lip angle to cause a discharge of the elevated material, or a throwing out.

These are high velocity Bucket Elevators for granular solids and are most usually Belt & Bucket in design.

*See this discharge video @ <http://www.go4b.com/starco/video>



"STARCO" & "SUPERSTARCO"...

The Universal Use Elevator Bucket Systems

Sometimes these known parameters are complicated by unknown factors such as Elevator design, air pressure or air movement, upstream & downstream bottlenecks, drive problems, belt slip and maintenance issues, to name just a few.

If you are experiencing any form of Bucket Elevator problems, we encourage you to contact our engineers for free Bucket Elevator Diagnosis. We can fax you or e-mail you our questionnaire sheet, and you may also visit us on the web at www.go4b.com and fill in this same questionnaire sheet online. ↗

This is the first article in a four part series by Chris Robinson Senior V.P

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Please call for in-depth product information, or visit our website at:

www.go4b.com

Employee Profile



Mike Robinson
Warehouse Manager
Production & Logistics

My name is Mike Robinson, and I was born and educated in England. I moved to the United States in 1978 to work as a boilermaker welder. In 1985 I joined Cactus Feeders, the largest cattle feeding company in the country, as a mill operator and, ultimately, as the assistant feed mill manager.

In September, 1992, I joined 4B Components as a warehouseman. Today, I am the manager in charge of production, purchasing, transportation & logistics and, most recently, network administrator.

Most of my spare time has been spent raising my daughter to her Senior year in High School, while trying not to scare away her boyfriend. (But I don't try very hard). I do, however, find time to enjoy motorcycles, "recreational" computing and building RC planes. +

PBS Show Features LeverMount

Although attendee numbers were down slightly, the 4B booth location and it's hard working staff helped to make the recent PBS show in Chicago, Rosemont a great success. Many thanks to booth personnel, Johnny Wheat (U.S.A.), Dave Wolstencroft, Adrian Morris and John Harrison (UK). The LeverMount drew the most attention, with many interested parties stopping for a quick demonstration of this new and innovative weighing assembly.

4B is already looking forward to the next PBS show in 2004 as it goes biannual. See you there! +



2002

~~2003~~

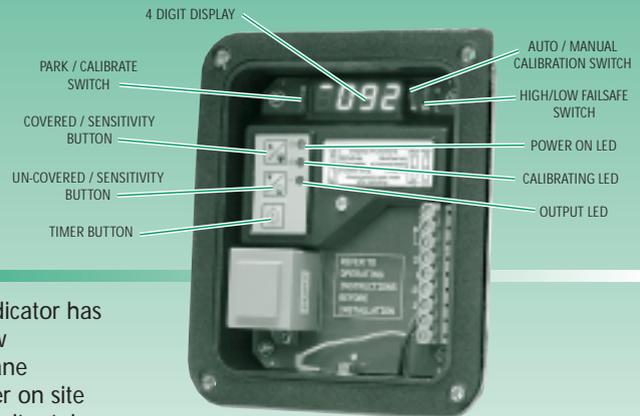
2004

NEWS FLASH

AutoSet MK7

New Point Level Indicator Displays an Advantage

The ever popular Autoset point level indicator has been recently updated. The Autoset now incorporates a LED display and membrane pushbuttons for much simpler and easier on site set-up. Now known as the AutoSet MK7, it retains all of the advantages of the earlier version such as data protection, product build-up compensation, and simple push-button calibration, but with the added advantage of providing the user with visual indication of the set values. The AutoSet MK7 is used for high or low level control of liquids, powders and free-flowing granular solids stored in tanks, bins and silos. With its



build-up compensation circuit and power-shield, the AutoSet MK7 is not affected by material build-up, and can be side or top mounted. Stainless steel probes come in many lengths up to 33ft. For high temperature or vibration applications, a remote version is also available. Class 2 Division 1 groups e, f, and g approvals for the US and Canada are standard. +

It all started with an Oil Can!



Did you know that 4B is a subsidiary of a larger U.K. company, Braime Pressings, of Leeds, England? T.F. and J.H. Braime, started a family firm back in 1888. T.H. (Thomas) Braime had an accident in which he had lost a thumb, but at the same time, gave him a chance to work on an idea which had been brewing for some time. In a small building on Leake Street, Hunslet, Thomas began production of small pressings with a flypress and started fabricating oilcans. This was no ordinary oilcan! It was quite an innovative product for its time. The oilcans were all metal, with a detachable spout and thumb press handle for a perfect single drop of oil to a full jet stream, and was stove enameled. Orders came from all over the world from Australia, Rio de Janeiro, Newfoundland, etc. The demand for the product found Thomas looking for a larger factory where he could expand the business.

With the increase in demand for pressings from the automotive industry, even larger space was required. In 1914, a new factory opened and was fully operational for the first World War effort between 1914 and 1918. In 1917, the brothers built the first canteen in Leeds, UK's 3rd largest industrial city, to provide hot meals for its new female workers. Gee, always the females to get the lucky breaks! The canteen was opened by Princess Mary! The new facility was quite unique in the fact that it offered tiled and marble floors in various areas of the factory, leaded windows and polished wood doors. Not just any ordinary factory!

The business is now being operated under the directorship of the grandsons of Harry Braime, Anthony and Nicholas. Not only is Braime the worlds largest producers of steel and polymer elevator buckets, it is a major manufacturer of automotive parts, fire prevention equipment, commercial catering appliances, and is involved in manufacturing parts for the medical, petrochemical and refrigeration and utility industries. Besides the subsidiary of 4B, Braime also have a sales office and manufacturing facilities in France and Buenos Aires, 4B SUDAMERICA. Braime won the Queen's Award for Export in 1998. It employs over 150 people in the U.K., and has stood the test of time! So you see, there is more to 4B than what you see in East Peoria, IL and we are proud to be a very large contributing partner inside a much larger company! 🍀

SPARKY'S SHOCKERS

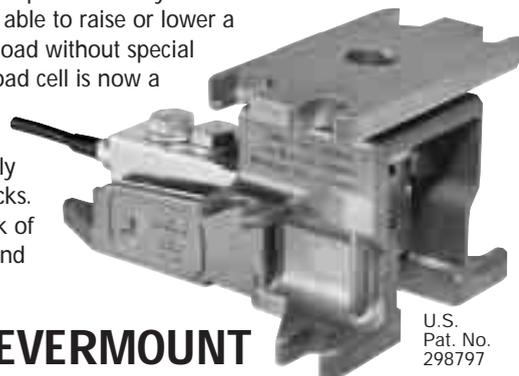


Keith Bohnker
Electronic Sales

No one likes downtime. Production is behind time & frantic, and you just found out that the batch weigher is weighing heavy. Apparently, the clean-up crew spent a little too much time with their high-pressure sprayer cleaning around a load cell.

Traditionally the only way to change out a load cell on a tank weighing system was to jack up the tank, block up the tank, replace the load cell and gently lower that tank back down. Hopefully the tank was empty, if not you had to find another tank to move the contents. After the job was completed you had to start all over again.

LeverMount improves process safety and reduces downtime by being able to raise or lower a vessel while under load without special tools. Replacing a load cell is now a one-man job and can be accomplished quickly without jacks & blocks. This reduces the risk of rupturing a vessel and injury to workers.



U.S.
Pat. No.
298797



LEVERMOUNT Process Weighing Edge

LeverMount is built for use in hostile environments, these hermetically sealed scale systems are constructed of 316 stainless steel with a smooth, easy to clean sanitary finish. LeverMount is suitable for use in food processing, chemical and pharmaceutical industries.

LeverMount is designed for use in light- and medium-capacity tanks, blenders, bins, hoppers and other demanding applications. 🍀

| Modules | 3 Module System Lbs. Capacity | 4 Module System Lbs.Capacity |
|-----------------|----------------------------------|---------------------------------|
| LeverMount 1100 | 3,300 | 4,400 |
| LeverMount 2200 | 6,600 | 8,800 |
| LeverMount 4400 | 13,200 | 17,600 |

Next time you design a weighing system try a LeverMount System.



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