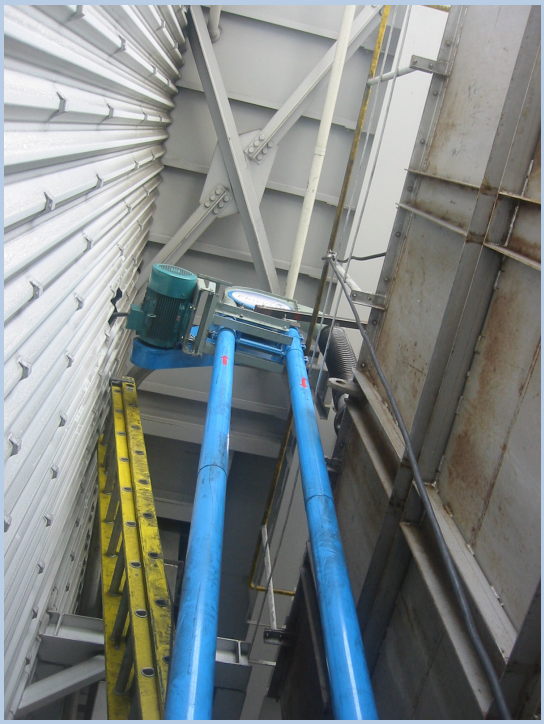
Technical Bulletin: **Gravity Flow**

By Larry Blitz – President of FloAero Inc

Bulk powder material entrance into a manufacturing process is reliably accomplished via gravity flow.

This statement immediately brings up the situation as to whether the manufacturing process requires the bulk powder material to be a continuous flow or a batch quantity. In either case, a suitable volume of the material shall be held in a Surge Bin above the inlet to the manufacturing process. That way, gravity material flow under the appropriate control for the manufacturing process is ascertained. To not have such a Surge Bin, compromises the overall reliability of the manufacturing process by virtue of adding a piece of equipment (or multiple pieces of equipment) to get the material to that manufacturing process inlet "just in time". And, the additional conveyor between a low level positioned Hopper/Bulk Bag simply adds another element to the overall success of that manufacturing process. Production manufacturing needs to be kept simple and straight forward by minimizing the overall manufacturing process reliability factor. And, a controlled gravity flow into the manufacturing process's inlet is the most reliable means. Control of all bulk powder materials is implemented via a Feeder. There are many styles, shapes, functions, etc, of Feeders, but they all relate to one common factor; and that is consistent accurate bulk powder material flow output. Certainly, there are more accurate styles, and less accurate styles. And, that simply needs to be decided upon based upon the manufacturing process requirements. Nevertheless, to continue the manufacturing process throughout the production day, the Surge Bin above this Feeder's inlet shall be refilled.



The bulk powder material within the elevated Surge Bin shall be replenished, periodically, depending upon the volume capacity of the Surge Bin and the manufacturing process's use rate. Rather than lift up (via fork lift, freight elevator, or similar) pallet loads of the bulk powder material to an elevated position (platform or higher floor level), the Floveyor aeromechanical conveyor allows an operator to dump the bulk powder material from the container that it is received within at the ground floor level, as if he were standing at the elevated position dumping the material. The Floveyor loads the material (as fast as it is being dumped by the operator) immediately and directly into the elevated Surge Bin. While all other types of conveyors rely on surge hoppers / bulk bags at the ground floor level to flood the material into it, such conveyors are sized only to transfer the bulk powder material to the manufacturing process's inlet "just in time". And, conveyors, by definition, do not have any consistent accurate material flow. On the other hand, the Floveyor aeromechanical conveyor removes this potential for inconsistent and inaccurate material flow performance from the manufacturing process overall reliability factor by its instantaneous material loading into the gravity flow Surge Bin. And, it is this Surge Bin that allows a Feeder to give the necessary consistent accurate material flow to the manufacturing process resulting in maintaining the reliable production throughout the day. The overall reliability factor remains with the manufacturing process itself. The operator only spends a matter of a few minutes to replenish the bulk powder material into the Surge Bin via a Floveyor aeromechanical conveyor.

The Floveyor aeromechanical conveyor is a dust contained machine, least amount of HP usage for its throughput rate, hygienic, versatile positions, reliable, bulk material loading device available in the worldwide market. The Floveyor loads or unloads granules, powders, flakes, or mixtures simply, efficiently, and quickly. For detailed information, contact FloAero Inc at Tel 818/789-0546 / E-mail info@floaero.com.