



# ADVANTAGES OF PNEUMATIC CONVEYING OVER MANUAL AND MECHANICAL CHARGING



## Operator and Environmental Health and Safety

- Ability to charge hazardous and toxic products safely
- Reduction/elimination of operator exposure/injury (especially back injury caused by lifting heavy bags to dump in manual operations)
- Closed system reduces the necessity of using expensive personal protective equipment (PPE)

## Cleanliness of Plant and Equipment

- Much easier to clean than mechanical equipment
- Closed system provides a dust free environment, substantially reducing equipment and facility clean-up
- Elimination of exterior contaminants

## Process Efficiency

- Ability to charge to vessel under pressure or vacuum, or with liquids (including solvents) present in the vessel
- Powder transfer rate can be varied and controlled
- Improved agitation reduces batch time
- Reduction in manpower required to charge vessel
- Reduces solids handling and eliminates hoists
- Controls reaction energy vs. HTM capacity

## Equipment Life

- Substantially reduces equipment maintenance
- Agitator and seal system are protected from deflection or damage due to overcharging of solids during mixing or starting the agitator in excess solids
- No need to open the manway, preventing risk of damage and wear and tear.

## Product Quality

- Suitable for pharmaceutical processes and other applications where product integrity is critical
- Closed system diminishes exterior contaminants which can jeopardize the purity of an entire batch

It is crucial in many pharmaceutical and fine chemical applications to contain the products that are in use. There are two main objectives in doing so: Keeping the product safe from the environment and keeping the environment (and those people working in it) safe from the product. Depending on the characteristics and toxicity of the product, one or both of these objectives must be met to ensure the high standards of product quality and operator safety. Beyond containment there are a number of benefits to using this kind of technology.

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