

# SUPPLIERS' TIPS

## I'm making a new dry bulk product. Where do I start in selecting a mechanical conveyor to handle it?

There are many questions to ask before selecting the correct mechanical conveyor for your application. These include:

- What's the material density and mass?
- What's the material size and shape?
- What's the material temperature and moisture content?
- What material transfer rate do you require?
- Will any transfer method damage or degrade the material?
- What transfer method will maintain the material's shape, form, and molecular structure?

Once you've determined the answers to these and other questions, you'll be able to decide which conveyor is right for your application.

*Brian D. Meyer,  
sales engineer,  
Marchant Schmidt,  
920-921-4760*

*Equipment suppliers are a valuable source of information about equipment and processes. In light of this, we occasionally ask suppliers a question of concern to our readers. Answers reflect the suppliers' general expertise and don't promote the suppliers' equipment. If you have a question you'd like suppliers to answer, send it to Alicia Tyznik, Assistant Editor, Powder and Bulk Engineering, 1155 Northland Drive, St. Paul, MN 55120; fax 651-287-5650, (atyznik@cscpub.com).*

In general, a vibrating conveyor will handle almost any conveying application as long as your material isn't extremely sticky. However, you might want to consider less costly alternatives. For example, if your conveyor must be very long and you don't require dust-tight operation, a belt conveyor is the best choice. If your material isn't hot or if your application requires steep inclines (more than 12 degrees), consider a screw or belt conveyor. For gentle material handling, consider using a belt or vibrating conveyor. For sanitary applications or applications that require clean conveying surfaces to avoid cross-contamination, your best choice is a vibrating conveyor.

*Doug Schieber,  
chemical industry sales manager,  
Carrier Vibrating Equipment,  
502-969-3171*

To select a mechanical conveying method, start by examining your material's physical characteristics and determine where and how far the material needs to be conveyed. These factors will help determine how to handle your material correctly. Most suppliers provide an application data sheet for you to fill out that helps the supplier properly evaluate your application's requirements.

*Dave Hansen,  
vice president of sales,  
Cambelt International,  
801-972-5511*

To select the correct mechanical conveyor for your material, determine the material's characteristics, then discuss your application with several suppliers that offer a broad

scope of equipment and experience. This way your selection isn't limited to what one individual supplier has to offer; it allows due consideration to each method.

Most important, understand what you're trying to achieve, and don't rush into buying something without considering every possible option.

*Andrew Leitch,  
vice president of sales,  
Gough Econ,  
704-319-5120*

Two key words to remember when selecting a mechanical conveyor are *process* and *properties*. By evaluating the process that produces or uses your material along with the material's critical physical properties, you'll be able to narrow the field of potential mechanical conveyor types.

Start by determining your process's conveying distance and required throughput. Length limitations will eliminate some conveyor types, and some conveyor types are best suited for certain throughput ranges. Your material's physical properties may also dictate your conveyor selection since certain properties, such as a large particle size or high fat content, make conveying difficult for some conveyor types. Even if your material is easy to convey, it may have properties that require special handling, such as friability that requires gentle handling or toxicity that requires a totally enclosed conveyor.

Most important, after you've considered all other factors, remember to keep it simple. If your application doesn't require a complex and potentially high-maintenance conveyor, choose the simplest method that works.

*David Boger,  
sales manager,  
Flexicon,  
888-353-9426*

To begin your selection process, look at the distance you'll be conveying your material. This typically suggests which system will be most

suitable for your application. For example, screw conveyors are generally used for shorter distances, but an aeromechanical conveyor is a suitable and often more cost-effective choice for conveying over a longer distance. A drag conveyor system is a good choice if your application has a lot of bends, corners, or discharge points. A bucket elevator is the best choice for conveying materials vertically over a long distance.

Next, determine the throughput rate you'd like to achieve. An aeromechanical conveyor or bucket elevator system would be most suitable for an up-and-in throughput with a larger capacity. A flexible or rigid screw conveyor is best if you're conveying over a shorter distance and the conveyor is frequently stopped and started — for example, to feed a packaging machine.

It's also important to understand the material you'll be handling. An aeromechanical conveyor is best if your material is friable, cohesive, easily aerated, prone to segregation, or dusty. However, a bucket elevator is a better choice if the material is abrasive.

*Andy Woodford,  
national sales manager,  
Aerocon Corp.,  
800-405-2376*

**T**o select a mechanical conveying method, start by researching your options. Many companies offer resource materials related to choosing the correct equipment for a process. These are often available free on suppliers' Web sites.

*Dave Heubel,  
sanitary markets manager,  
Eriez Magnetics,  
800-345-4946*