SUPPLIERS' TIPS

What are the most important factors to consider when choosing a feeder for my dry bulk material?

The first step when choosing a feeder is to gather basic information about your material and application, including the required capacity, turndown, feed accuracy, density, temperature, moisture, particle size, and equipment layout. Next, determine your dust control, electrical, and space and installation requirements. If you have a drawing or digital photo of the feeding area, it can help the supplier understand your space and operational restrictions. Last, if you're replacing a feeder, tell the supplier what type of feeder you're currently using, why you want to replace it, and what you do and don't like about it. This will help the supplier determine the best feeder for your application.

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Critical factors to consider when choosing a feeder include:

- Material properties, flow characteristics, and temperatures
- Material contact areas (which influence materials of construction)
- Space or headroom constraints
- Feeder refilling device
- Volumetric or gravimetric feeding requirements (which influence the feedrate)
- Upstream and downstream process conditions
- Environmental conditions
- Installation location (indoors or outdoors)
- Pressure or vacuum differentials

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When selecting a feeder for your application, the following factors should be considered:

- Does the metering accuracy need to be within 1 to 1.5 percent or 0.25 to 0.5 percent of the set rate? This will determine if you need a volumetric or gravimetric feeder.
- Is the feeder you're considering properly feeding your material or a similar material in a different application?
- Ask the supplier to conduct material tests with this feeder. Does the feeder meter the material, without interruption, at the required rate within the required time frame at the accuracy needed?
- Is the feeder versatile? Make sure the feeder can be altered to accommodate higher or lower feedrates in case your application's requirements change.
- Does the feeder controller provide all the information needed? Make sure it also works in conjunction with any other applicable process controllers.
- Consider the feeder's complexity. Is it simple to operate, and are the controls user-friendly? How many moving parts are there? How much maintenance is required?
- Is the feeder rugged enough to withstand your everyday operational needs?
- Will the feeder fit your available space, or will you have to make extensive modifications?
- Does the feeder's cost fit your budget? Remember that a high-priced feeder doesn't necessarily mean a more-efficient operation.

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To select a feeder for your application, ask the following questions:

- What is your material's bulk density?
- What is your required feedrate?
- Do you plan to increase your feedrate capacity in the future?
- How much storage or hopper capacity do you need above your feeder?
- Are you worried about material degradation from agitation?
- Will you be "slaving" this feeder from another device?
- What are your discharge requirements?
- What is prefeeding your feeder, and does it affect your material's density?
- What accuracy does your application require?

Take advantage of the free material testing most suppliers provide. Testing ensures that the feeder definitely meets your application's requirements. Check if the supplier offers after-purchase support or any other customer service perks, such as a 24-hour hotline. In addition, make sure you believe in and trust your local representative so you can be assured that you've made the right feeder and supplier selection.

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The three most important factors to consider when choosing a feeder for your dry bulk material are the material's characteristics, the application's restrictions, and the throughput requirement. These factors establish which feeder is ideal for your application.

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Equipment suppliers are a valuable source of information about equipment and processes. In light of this, each month we 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, Associate Editor, Powder and Bulk Engineering, *1155 Northland Drive, St. Paul, MN 55120; fax 651-287-5650 (atyznik@cscpub.com).*