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Choosing the Right Conveyor

Part 2: Conveyor Choice

This is Part 2 of a five-part series on selecting drag conveyors. To view the previous article on selecting a supplier, click [here](#).

A variety of conveyance systems are available for bulk material handling: drag conveyors (a.k.a. paddle conveyors, chain conveyors, or scraper conveyors), belt conveyors, pneumatic conveyance systems. Which conveyor system will best work for your application depends on many factors, such as the material being conveyed, the conveyor configuration, up-front costs, efficiency requirements, and the amount of maintenance you are willing to perform.

There is no one-size-fits-all conveyor. Each conveyor system has strengths and weaknesses and applications for which it's best suited. To help in your understanding, we've provided the chart below, which compares conveyor systems in terms of their capabilities and performance. While the information generally holds true, capabilities of individual conveyance systems vary with each manufacturer. The list is not meant to be a comprehensive resource.

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Key	SMART Conveyor	Tubular drag conveyor	Pneumatic conveyance system	Belt conveyor	Troughed belt conveyor	Conventional screw conveyor	Bucket elevator	Vibrating conveyor
1. Linked conveyors allow longer routes								
2. Requires multiple conveyors and drives								
3. Restricted elevating capability								
4. Requires features to condition air								
5. Dependent on application								
6. Immobile but modular, can be reconfigured								
7. Dependent on design								
General Features								
Volume: Low	•	•		•	•		•	•
Volume: Medium	•	•	•	•	•	•	•	•
Volume: High	•		•	•	•	•	•	•
Conveyance rate: High			•		•			
Maintenance: Low	•			•		•		•
Maintenance: High		•					•	
Energy consumption: Low	•							
Energy consumption: High		•	•					
Installation costs: Low				•				
Installation costs: High	•	•	•	•	•	•	•	•
Mobile or Easily Reconfigured	6	6		7				
Length: 0-65 ft.	•	•	•	•	•	1	•	1
Length: 66-98 ft.	•	•	•	•	•	1	1	1
Length: 98-394 ft.	1	1	•	•	•	1	1	1
Length: 394+ ft.	1	1	•	•	•	1	1	1
Functional features								
Requires dust filtration			•					
Ability to elevate	•	•	•	•	3	•	•	3
Dust tight	•	•	•			•	•	
Totally enclosed	•	•	•			•	•	
Pressure tight			•					
Gentle handling	•	•	•	•	•	•	•	•
Blending						•		•
Sanitary (food-grade)		•	•	•	•		•	•
Inlets: Multiple	•	•		•	•	•		•
Outlets: Multiple	•	•	•			•	•	•
Path: Multiplane	•	•	•	2	2	2	1	1
Conveyance: Variable	•	•	•	•	•	•	•	•
Self cleaning	•	•	•	•	•			•
Self feeding	•	•				•		•
Bulk materials handled								
Abrasive	•	•		•	•	•	•	•
Fragile	5	•		•	•	5	5	5
Powder	•	•	•	•	•	•	•	•
High density, high weight	•	•		•	•	•	•	•
High density, high volume					•			
Stringy	•	•	•	•	•			•
Length: Long				•	•			•
Size: Moderate variation	•	•		•	•	•	•	
Size: Large variation	5			•	•			5
Hot	•	•	•	•	•	•	•	•
Cold	•	•	•	•	•	•	•	•
Sludge	5	•		•	•	•		•
Slurry	5							
Moist or wet	•	•		•	•	•		
Dry	•	•		•	•		•	•
Hygroscopic	5	•	4			•	•	
Maintains blend (comparitively well)	•	•		•	•	•	•	

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