

Clean, safe, rapid powder handling

Total batch transfers in a
fully enclosed conveyor



Discover better powder handling

How you manage your bulk material powder handling can make or break your production line. Transferring powders and granules demands precision – any compromise impacts efficiency, safety, and product integrity. Floveyor's aero-mechanical conveying systems ensure perfect balance, proven over 65 years of global installations.

The Floveyor aero-mechanical conveyor (AMC) is designed, engineered, manufactured and tested in Western Australia to exacting standards for industries relying on cleanliness, safety and product integrity in new and existing facilities.

Setting a high standard in vertical point-to-point transfers, the Floveyor AMC handles thousands of powders and granules in a single incline conveyor system. High throughputs and low maintenance demands contribute to the appeal of the AMC.



The difference: FloDisc® Technology

Floveyor's proprietary FloDisc Technology suspends raw materials in an air pocket in an enclosed tube and propels the materials to a collection point. This provides a rapid but gentle way to safely transfer materials for diverse industrial powder handling applications.

Only Floveyor aero-mechanical conveyors with FloDisc can maintain product integrity, ensure operator safety, and maximise energy efficiency at high throughputs.

Centrifugal force

6.8 m/sec
From 1-54 tph

Key benefits of aero-mechanical conveying



Unmatched versatility

Conveys particle sizes from fine dusts to larger granules, handling countless powder types.



Minimal residue

Leaves negligible leftover material, reducing cross-contamination and streamlining product changeovers.



Gentle handling

Minimises breakage and separation, preserving material integrity and blends.



Highly cleanable

Supports CIP, COP, or inert flushing for rigorous hygiene and easy validation.



Energy efficient

Transfers high tonnages with minimal power, significantly lowering overall operational costs.



Certified safe

Meets IECEx, ATEX, FDA, and EC requirements for hazardous or food-safe applications.



Easy maintenance

Lightweight design and fewer moving parts reduce downtime and operator risks.



Compact footprint

Requires limited space, enabling installation in tight or complex process layouts.



High throughputs

Shorten cycles with unmatched conveying speed, increasing capacity and process efficiency.

How aero-mechanical conveying performs against other technologies

The right bulk materials handling solution helps your company maintain competitive advantage, lower your operating costs, and even weather economic downturns.

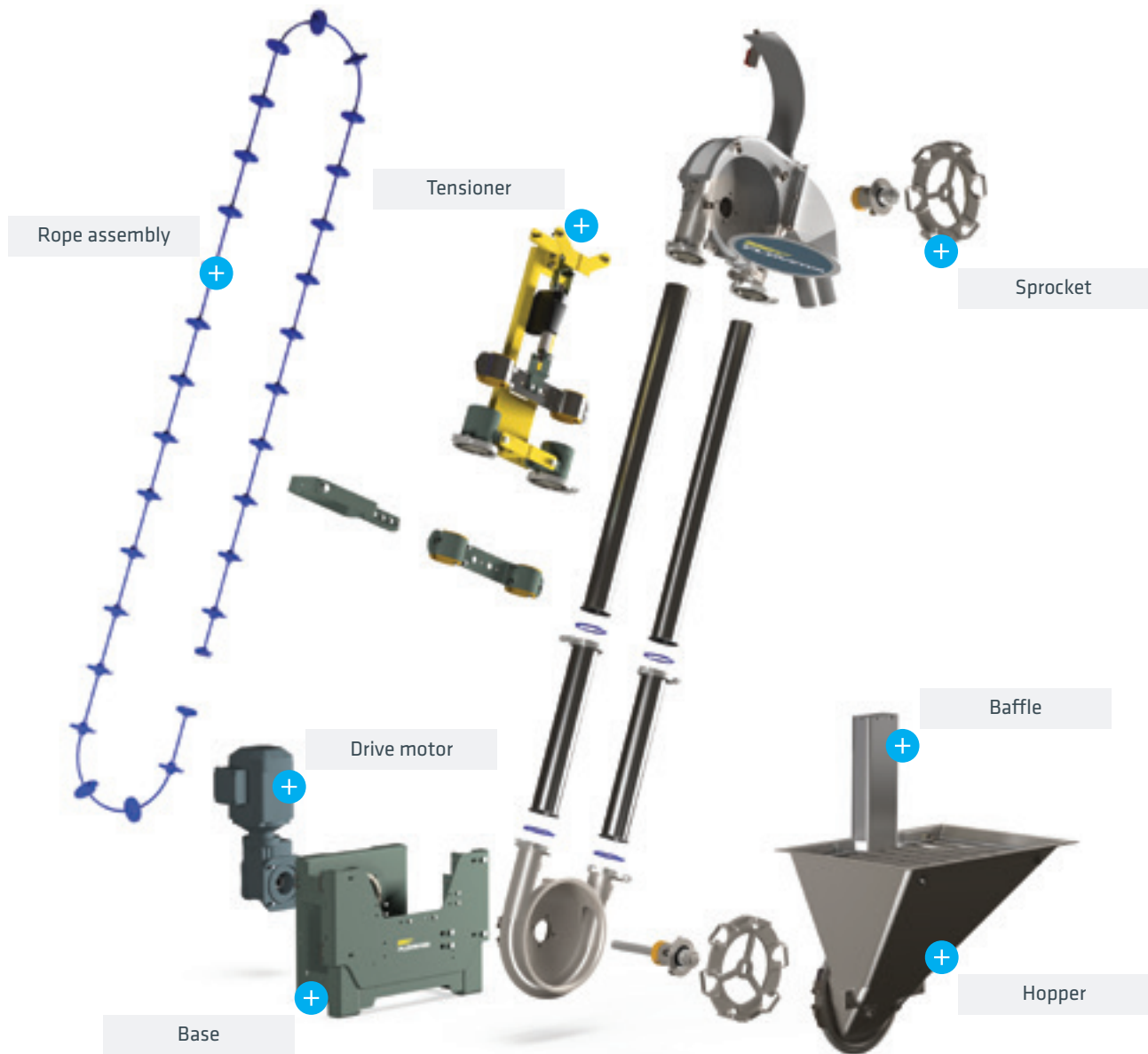
Analysing each powder handling solution before investing lets you maximise your potential return on investment.

AMC conveyors typically reduce energy costs by over 80% compared to lean pneumatic conveyors.

	Criteria	Aero-mechanical	Lean pneumatic	Dense pneumatic	Bucket elevator	Drag conveyor (chain)
Material suitability	Gentle handling (material integrity)	Minimal degradation, preserves blend homogenisation. 	High velocity causes material breakage and blend separation. 	Gentle, maintains blend homogenisation but prone to blockage issues. 	Gentle handling, homogeneous transfer but significant powder spillage risks. 	Gentle but contamination and fine particle degradation from chain friction. 
	Material flexibility (range of types handled)	Wide range including fine powders, granules, and abrasive and cohesive materials. 	Struggles with cohesive, fragile or abrasive materials. 	Handles a broader range, but prone to blockages with cohesive materials. 	Suitable for larger particle sizes, difficulty with powders/fine particles. 	Wide range of materials, friction issues with abrasive or cohesive powders. 
	Residue and cross-contamination risk	Total batch transfer, negligible residue, CIP/COP capable. 	High residue, contamination risks between batches. 	Lower residue. Difficult to clear blockages, increasing contamination risk. 	High residue and internal spillage in housing. Difficult, costly cleaning. 	Chain contamination risk, moderate residue. 
Plant suitability	Maintenance accessibility and cleaning turnaround	Quick cleaning (wet/dry), easy maintenance, low downtime. 	Difficult cleaning, often requires dedicated lines, frequent maintenance. 	Complex maintenance, difficult blockage clearing, can require dedicated lines. 	Moderate complexity, increased downtime, frequent maintenance required. 	Moderate complexity, mechanical wear, specialised tools and equipment needed. 
	Throughput capacity	High throughput up to 54 tph. 	Flexible capacity, expensive at high throughput. 	High capacity achievable, high cost implications. 	High throughput, but highly dependent on material type. 	Moderate throughput, larger diameters required at higher capacities. 
	Complex or long routes	Length limitations, ideal for direct point-to-point transfers. 	Ideal for long, complex routing. 	Suitable for complex, long routing. Operationally complex. 	Primarily vertical routes, limited flexibility. 	Highly flexible in complex routing situations. 
	Explosion and dust safety	Fully enclosed with full IECEx/ATEX mechanical certification for hazardous zones. 	High air velocity raises dust explosion risk; mechanical hazards often uncertified. 	Enclosed, but high-pressure air adds risk; mechanical hazards often unmanaged. 	Open system with dust leakage; mechanical ignition risks often unmanaged. 	Enclosed, but chain friction adds ignition risk; mechanical risks often unmanaged. 

Legend:  Excellent  Good  Fair  Poor

The Floveyor aero-mechanical conveyor at its core



Conveyor size	Tube size	Maximum conveying length	Drive size	Maximum particle size	Maximum typical throughput ⁽¹⁾⁽²⁾
F3	3 in (76.2 mm)	13.7 m (45'0")	1.5 - 2.2 kW	≤ 6 mm	15 tph (16.7 t/hr)
F4	4 in (101.6 mm)	19.8 m (65'0")	3.0 - 5.5 kW	≤ 9 mm	30 tph (32.9 t/hr)
F5	5 in (127 mm)	16.7 m (55'0")	4.0 - 7.5 kW	≤ 12 mm	54 tph (58 t/hr)

Notes: (1) Sample figures only for quick reference only. Actual throughput dependent on bulk material characteristics.
(2) Maximum capacity; no lower limit applies for the AMC.

Getting the perfect fit

Generic solutions lead to compromised performance or inflated costs. Floveyor conveyors are engineered specifically for your operational realities while delivering optimal efficiency, safety, and reliability.

Materials handled

Floveyor transfers thousands of powders and granules for diverse industries, handling everything from food production to hazardous chemical processing.



Activated carbon



Chicken pellets



Coffee beans



Detergent powder



Icing sugar



Instant coffee



Milk powder



Muesli



Puffed rice



Salt



TiO2



Urea prill

Bulk material capacities

The Floveyor AMC is optimised for high conveying efficiency. Ultimately, throughput capacity is dependent on a combination of factors in your plant including handling equipment, facility layout, forklift availability, storage distances, and operational personnel.

Conveyor size	Maximum throughput	 25 kg small bag	 1 tonne bulk bag ⁽¹⁾	 20 ft sea container ⁽³⁾
F3	12 tph ⁽²⁾⁽⁵⁾	480 bags/hr (~8 bags/min)	12 bags/hr or 12 tph	~1 container every 1 hr 40 mins
F4	24 tph ⁽²⁾⁽⁵⁾	960 bags/hr ⁽⁴⁾ (~16 bags/min)	24 bags/hr or 24 tph	~1 container every 50 mins
F5	42 tph ⁽²⁾⁽⁵⁾	1,680 bags/hr ⁽⁴⁾ (~28 bags/min)	42 bags/hr or 42 tph	~1 container every 30 mins

Notes: (1) 1 tonne = 1,000 kg. (2) All examples are based on a standard bulk density of 800 kg/m³. (3) A standard 20 ft sea container typically holds approximately 20 tonnes. (4) Small bag manual handling realistically maxes out at ~5–8 bags/min (300–480 bags/hr). (5) Floveyor AMC is optimised for high conveying efficiency, however ultimate throughput depends on handling equipment, facility layout, forklift availability, storage distances, and operational personnel.

Quality standards

Achieving excellence in powder handling requires a stringent focus on global design, engineering and manufacturing standards. This is why Floveyor conveyors operate safely and efficiently in even the most challenging applications and environments.

- Meets quality standards for European ATEX 2014/34/EU directive and IECEx compliance
- Listed in EHEDG Guideline 36, 1 of only 5 food-safe conveying systems
- Standards-based design in accordance with AS/NZS/ISO/EN
- Designed, engineered and manufactured to GMP, AML and 3-A guidelines
- All materials in product contact areas are traceable and certified to American FDA and EU EC regulations.

Certified safe for explosive atmospheres



ATEX Certified
Equipment marking:
Ex II 1/2 D Ex h IIC 150°C Da/Db
Certificate No. TÜV 24 ATEX 9208 X



IECEx Certified
Equipment marking:
Ex h / h mb tb IIC T150°C Da/Db
Certificate No. IECEx ExTC 23.0020X

Quality assured



ISO Certified
ISO 9001:2015
Quality Management Systems

The industry benchmark in powder handling

For nearly seven decades, Floveyor's aero-mechanical conveyors have set the global standard in bulk material transfer – delivering unparalleled reliability, hygiene, and efficiency.



Where aero-mechanical conveying adds the most value



Conveying length

Conveyed lengths of up to 20 m (65 ft)



Throughput requirement

Up to 105,000 kg/hr (231,000 lb/hr)



Straight-line installations

Including those that require 90° corners



24/7 operation

Up to 24hr/day operation with regular scheduled maintenance



Powders and granules

Handles up to 12 mm (0.5 in) in size



Material variety

Handles a variety of raw materials and blended products



Process temperature

Process temperature from -5°C (20°F) to 120°C (250°F)



Batching operations

Where total batch transfer is desirable



Configurations



Direct linear

Flexible configurations from vertical to horizontal, adapting to any inclination



Horizontal

Ideal for high volume conveying within a compact horizontal footprint



Bi-directional

Perfect for efficient high volume conveying with dual outlet options



Mobile

The ultimate in versatility, efficiency, and lean powder conveying solutions



Corner unit

Available in vertical-horizontal or horizontal-vertical configurations



Dual corner unit

Configurable as vertical-horizontal-vertical or any dual corner arrangement

Products designed for industry needs

Floveyor's AMC product ranges ensure fast, safe and low-maintenance powder handling designed to meet the stringent demands of industrial operations.



Our aero-mechanical conveying product ranges



Elementa

Compliance and quality assurance for low-risk, dry food stuffs



Nutria

Clean design benefits for sophisticated food processing



Pura

Engineered for stringent global food safety requirements



Avida

Reliable, rapid order fulfilment with low cost of ownership



Robusta

When safety and durability are crucial



Endura

Effortless integration with complex applications and sites

Our bulk material handling equipment

Floveyor offers modular design for powder handling equipment to cater to every application and plant configuration. Each component seamlessly integrates with both new and existing powder handling systems for optimal bulk material handling.

CONVEYING

BAG UNLOADING

CONTAINER UNLOADING

MATERIAL CONDITIONING

BATCHING AND WEIGHING

TRUCK LOADING

Maintenance

While AMCs accumulate minimal residue, cleanliness is essential to maximise yield and avoid product contamination. Floveyor offers multiple ways to maintain the aero-mechanical conveyor which ensures the highest quality and integrity of your product.

Dry cleaning

Air nozzles within the housing return any settled residue to the main product stream. This ensures total batch transfer and avoids introducing moisture into the system.

Wet cleaning

The AMC can convey liquids at high speeds for a recirculating wash cycle to clean the conveyor internals. Ideal for adhesive, corrosive, hygroscopic, bacterially sensitive or allergenic products.

Inert cleaning

Inert materials such as granular salt or broken rice are used to flush out residue. Alternatively, inert gas or air can be used for applications sensitive to contamination risks.

Scheduling regular preventative maintenance to inspect items such as the rope assembly, bearings and seals avoids costly unplanned downtime during production.

When well-maintained, Floveyor AMCs can operate 24 hours a day. It's normal for a machine to be in service for decades with high availability rates and minimal downtime.

About Floveyor

Floveyor has delivered conveyor machinery and equipment since 1958 when they invented aero-mechanical conveying. From our factory in Western Australia we design, engineer, manufacture, and distribute our conveyors and bulk material handling equipment. We partner with major global brands and small manufacturers alike to build efficiency and safety into their powder handling operations while ensuring product integrity and maximum yields during transfer.

The Floveyor global partner network ensures customers receive local sales and support in their own language and in their regional time zone.



RESPONSIVE TURNAROUND



MULTIPLE TIME ZONES



SPECIALIST TECHNICAL SUPPORT



Find out how to optimise your plant with a Floveyor AMC powder handling system. Book a free demonstration or consultation with our powder handling experts.

FLOVEYOR.COM



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