



Manufacturing and associated logistics continue to automate to support the ever-changing needs of the supply chain. As a result, so do the material handling needs. The demands of ecommerce, just-in-time (JIT) distribution and escalating real estate create excellent opportunities to consider spiral conveying technology.

Spiral conveyor technology is not new; however, it's now taking a stronger position in the last five years for meeting space, throughput and safety requirements. Spiral conveyors provide a big advantage over traditional incline and elevator components when designing your packaging line and logistics DC/WH. Elevation changes in your layout create unique opportunities to consider spiral technology, with added benefits for many packaging professionals.



Spiral conveyors provide a big advantage over traditional incline and elevator components when designing a packaging line and logistics DC/WH. (photo courtesy Ambaflex, Inc.)

Besides the elevation benefit, spiral technology can be used to support various line needs that include, but are not limited to:

1. Space savings
2. Operational access
3. Offline or inline buffering
4. Time delay related to a process
5. Dynamic accumulation

Space savings on valuable logistical and packaging layouts is a huge advantage in overall “footprint” that provides big efficiency gains in design. Standard configuration footprint options accommodate flexible design solutions, when matched to adjacent conveyor. In most plants and logistical operations, there is a lot of unused vertical floor space; spirals can be used to solve other application problems that historically required valuable floor space for primary and secondary packed items.

Operational access can be an issue in plants which have a limited production facility or are growing out of their current space. Space is almost always an issue; the ideal is to have more machines with fewer people. Supply paths for materials should be short and, when fixing issues in multi-line operations, time is of the essence. Too often, packing and distribution lines become long and drawn-out, blocking access. A quick, easy access around the equipment is required—but not without compromising safety. An ideal solution would be product flow that goes both up and down, to create access. Traditional solutions include “step-overs” or “crawl-under” systems or more

SPIRAL CONVEYOR TECHNOLOGY



Elevation changes in your layout create unique opportunities to consider spiral technology, with added benefits. (photo courtesy Ambaflex, Inc.)

down, with a connection conveyor in-between; or one unit, one belt and drive system.

Offline or inline buffering can be needed to add value and *not* cover weakness in a packaging line operation. Traditional buffering systems size is dictated by the time you need to buffer your products. Large tables or long runs back and forth of conveyor are the most traditional methods. If your floor space is limited, it's best to try to use the vertical space above your lines to buffer your products. Spirals can provide a huge space-saving advantage, as well as the ability to buffer a large amount of product, depending on size and line speed. Spirals can also be used in an offline scenario, where products are gated into a "holding spiral" then metered back into the line, given the

limited, but less efficient, clamp conveyors, elevators or inclined belts. Spirals, in this case, save space and create a safe work environment for operations: one up and one

demand. Inline buffering can create a longer pathway for your products to travel, thus allowing other components to run more efficiently.

POWER TRANSMISSION-PART CONVEYING PYRATHANE® BELTS



SAMPLES
AVAILABLE



*Pyramid Pyrrthane Belts® —
the standard of the industry!
Try them on your conveyor.*

**Lifetime Warranty Against
Manufacturing Defects**

**CUSTOM MADE IN INCH,
METRIC & O-RING SIZES**

Round, Flat and Connectable
Polyurethane Belts

- Very Clean Operation
- Eliminates Tensioning Devices
- Exceptional Abrasion Resistance

AN ISO 9001
CERTIFIED
COMPANY



**PYRAMID
INCORPORATED**

SINCE
1967

SPIRAL CONVEYOR TECHNOLOGY

Time delay is needed in packaging operations when you're dealing with a product that might have to be cooled; delayed in the process for upstream; or even curing products (such as glue on book bindings before they can be boxed). Spirals are an excellent solution for time delay, as they offer better space savings over traditional cooling or cure racks. Spirals can be configured for the specific applications, allowing enough time and distance for the products to be handled by the next part of the packaging process.

Dynamic accumulation The investment to automate a packaging or logistical operation is a significant investment. Line harmonics play an important role between profit and loss. The most efficient lines are not always the fastest, with a variety of factors that can cause "constraints" on your line that need to be balanced. Spiral technology can play an important role in solving your accumulation need. Elimination of micro-stops in the line is important to keep profits up and packages moving out the door. Dynamic and "first in first out" (FIFO) requirements are needed to compensate for speed changes that keep upstream or downstream processes running. Limited floor space on new and existing line layouts can take advantage of the vertical space above. Spiral accumulation is worth investigating to reduce waste; increase your line efficiency; and boost your profits.

In closing, key points about spiral conveyance technology:

- Standard in the logistics and packaging industry for 20 years
- Easy integration into any layout (mechanical, electrical, controls)
- Low total cost of ownership (TCO)
- Simple maintenance
- Quiet running
- "Best value" component rated by top industry professionals **WMHS**



ABOUT THE AUTHOR

Jeffrey Scicchitano is the Americas Sales Manager for Ambaflex, Inc., with over 20 years' experience developing strategic sales plans and teams in the FMCG, packaging and logistical markets. Jeff has a deep passion for solving customer applications and leading his team to do the same building trust with their clients at Ambaflex.

Replacement Lighting Systems Available

48" LED, all mounting hardware included, direct replacement for old fluorescent lights. **Improve your productivity!**

- ☐ Energy efficient
- ☐ LED, color balanced lighting



Progressive Ergonomic Movement

Since 1984



BRUTE Not Needed

CM3000 - 2000lb capacity
Heavy-duty extruded aluminum
Adjustable height and shelf



Pop-Up Ball Ergonomic Work Stations
Applications are only limited to your imagination!



Dealer inquiries accepted.

Contact us for information and your local dealer today at:

Call: (508) 481-3322 • Email: info@Omtec.com • www.Omtec.com