



New Spiral Conveyors Save Space and Increase Throughput

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New advances in spiral conveyor technology offer significant productivity and operational benefits in a wide number of industries and applications where space for material handling systems may be limited — manufacturing, warehouse operations, packaging, bottling, and order fulfillment.

Rather than the horizontal movement of components or products offered by traditional conveyors, spiral conveyors move goods along a vertical axis. Spiral conveyors are ideal for moving cartons, bags, bundles, trays, totes, pails, cans, bottles, containers, and wrapped or unwrapped items.

Ryson International developed its next generation spiral conveyors based on extensive input from end users and from research and development of promising technologies. This new generation emphasizes simplicity, modularity, quality, and reliability. These systems require minimal maintenance and are capable of long-term three-shift-per-day operation.

Saving Space

Spiral conveyors are an attractive alternative to traditional incline conveyors because of their small footprint. Depending on the size of load to be handled, this next generation solution can be slotted into a circular workspace between 4 feet 8 inches and 8 feet 2 inches in diameter. This small space requirement means that these conveyors can be pre-assembled, pre-tested, and shipped in one piece to the end user. This makes start up faster and easier. Pre-assembly also reduces field-based installation costs and glitches.

The spirals are frequently used in cooler and freezer applications where floor space is at a high premium.

This new generation spiral conveyors also compares very favorably to conventional belt spirals which have a much larger diameter, need multiple drives and are more difficult to install and maintain.

Vertical Accumulation Buffering

Combining two or more spirals for up and down movements makes these advanced spiral conveyors ideal for vertical accumulation buffering. A typical application for buffering occurs when products need extra time for cooling, drying, or curing. This configuration also provides dynamic accumulation to facilitate shorter production and packaging line interruptions. Overhead space is effectively utilized for dynamic storage, while preserving valuable floor space.



Increased throughput

The pressure to increase throughput and shorten order fulfillment is being felt by most companies today. Conventional elevators and lifts simply cannot keep up with this demand. High speed next generation spiral conveyors are the solution to conveying components and products in a continuous flow. These new spiral conveyors operate at speeds of up to 200 feet per minute. Since these conveyors can handle a large variety of load types and sizes, there is minimal to no time required for stopping the line for changeover or adjustment. This helps maintain high throughput. Lifts and elevators simply do not offer these kinds of productivity enhancements. Lifts and elevators are also more complex and require more devices to operate, which translates into reduced reliability and higher maintenance and energy costs.

Additional Benefits

- Only one drive motor is needed, creating not only savings for system integration, but also conserving energy.
- Proprietary low-friction chain-slat arrangement assures low maintenance and long life, with the added benefit of lower noise levels — below 70 DB

Spiral conveyors are:

- Equipped with automatic chain tensioning and have built-in overload protection
- Offer modular design, and are made-to-order, tailored to the customer's specific needs
- Easily reconfigured in the field to meet emerging needs
- Can be delivered in powder coated carbon steel, stainless steel, or washdown versions suitable for food handling