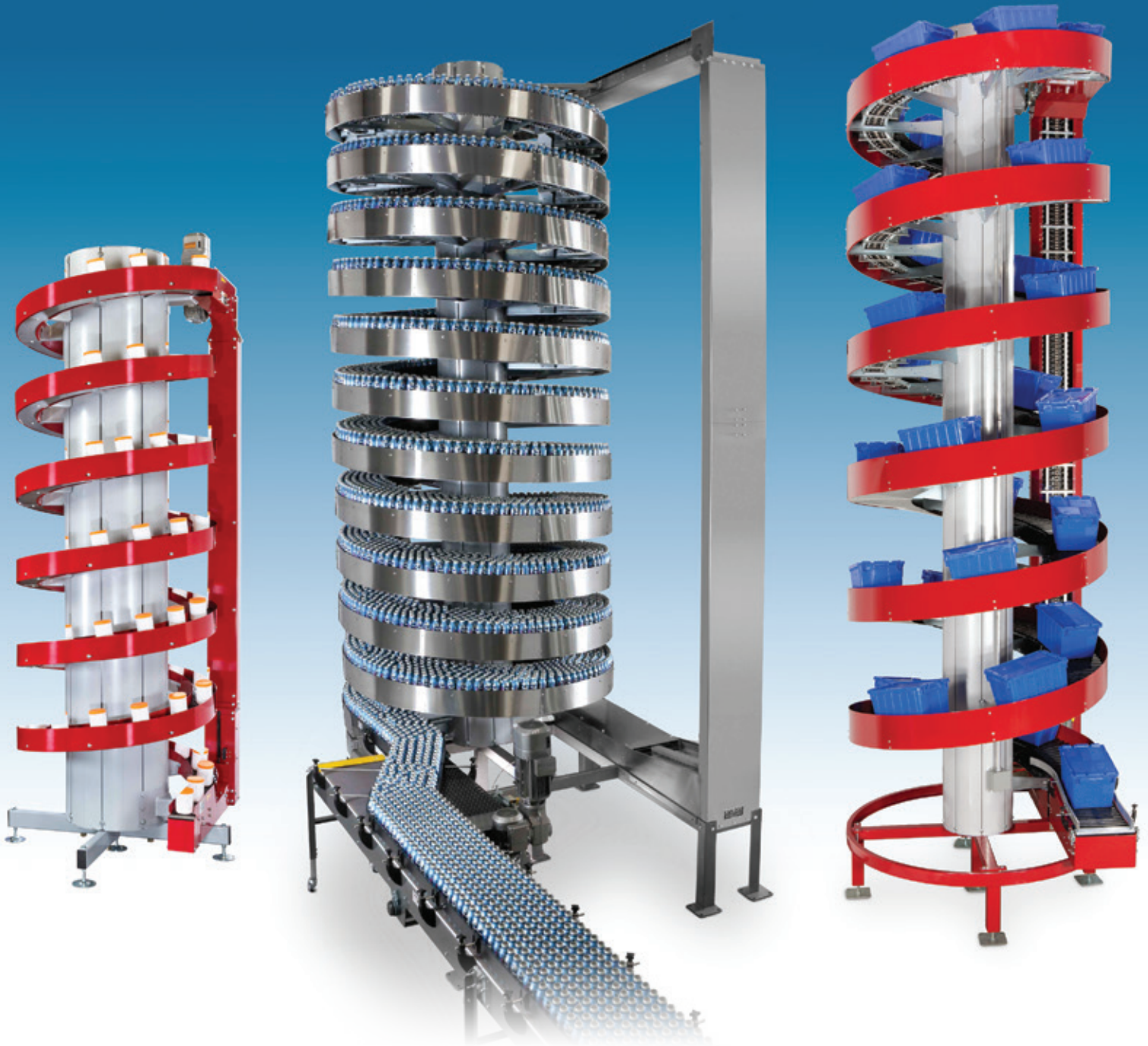


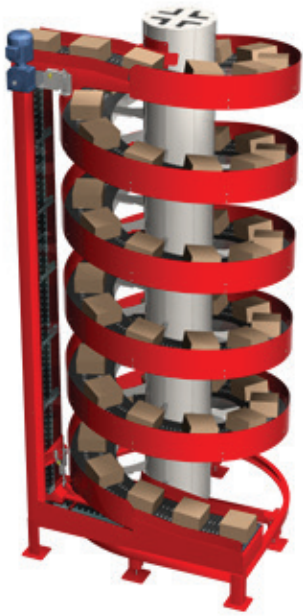
VERTICAL CONVEYING SOLUTIONS



PRODUCT CATALOG

A MEMBER OF ROYAL APOLLO GROUP

Ryson Vertical Spiral Conveyors



Central to our design is the Ryson proprietary slat-style belts designed with rolling friction without any sliding movements or wear strips. This facilitates a small footprint, high speed, low noise, low maintenance and a long life. Ryson Spirals are available in powder coated carbon steel, hybrid, stainless steel, washdown and freezer versions.

Unit Load Spirals:

The Ryson Unit Load Spirals can convey full and empty cartons, cases, trays, totes and all sorts of packaged goods in a continuous flow. Loads are conveyed reliably on our proprietary slat type belts, which come in 10 standard widths ranging from 6" to 36" depending on the product size. The slats are overlapping and provide an efficient and safe conveying surface at speeds up to 200 FPM.

High Capacity Spirals:

The High Capacity Spirals are for the tough jobs and are in response to our customers' need to go higher and handle more weight. They can handle twice the weight capacity of our standard spirals at speeds up to 200 PFM. The total weight capacity in the spiral at any one time is 3600 lbs. Only one drive motor is required, resulting in substantial savings in energy, controls and system integration.

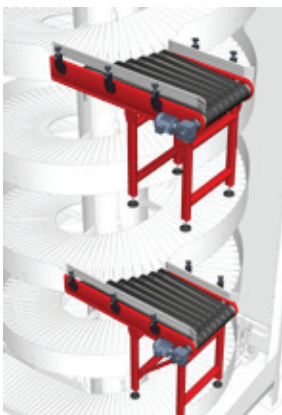
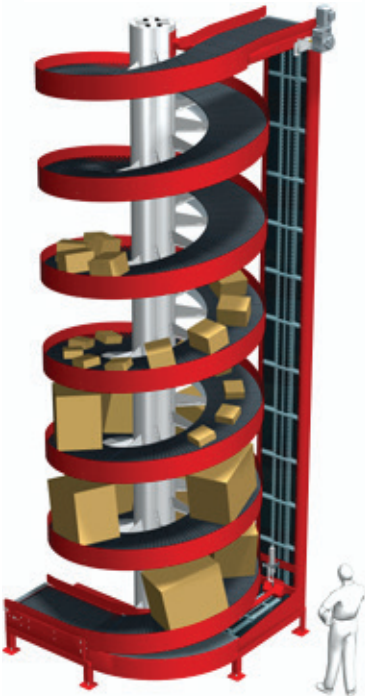
Wide Trak Spirals:

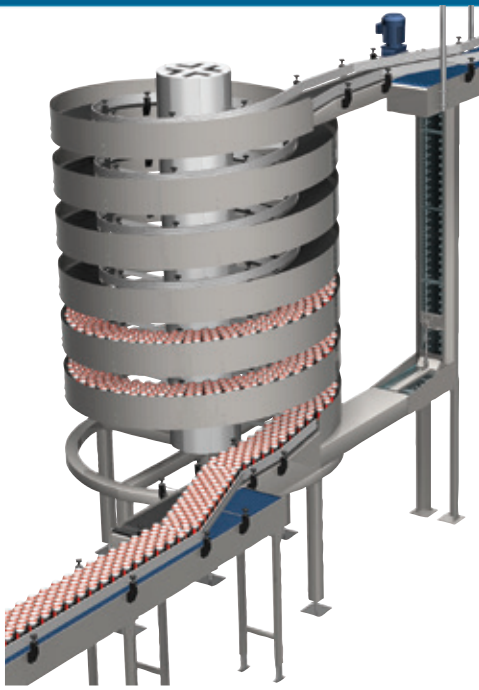
These spirals can handle a variety of load sizes, big and small with their 30" or 36" wide slats. The Wide Trak Spirals can handle double the weight capacity of our standard spirals, and can provide an elevation change of up to 50 feet with only one drive. They are ideal for warehousing and order picking operations.

Multiple Entry and Exit Spirals:

Optionally, the High Capacity and Wide Trak Spirals can be configured to allow loads to enter or exit the spirals at intermediate elevations. The Ryson Induction and Divert Out conveyors feature an individually adjustable conveying surface to match the spiral pitch, assuring a safe and reliable product transfer.

Loads can enter or exit the spiral in the up or down rotation. This is a perfect application for multi-level warehousing and order picking operations. This concept is also commonly used in applications where a single spiral connects multiple production or packaging elevations.





Mass Flow Spirals:

The Mass Flow Spirals convey full or empty bottles, cans, jars and other types of containers. Products are conveyed up or down in single file or in a continuous mass flow at a rate of up to 2,000 units per minute. This type of spiral is equipped with a nesting slat, providing a smooth flat conveying surface. The Mass Flow Spirals are equipped with extended in and outfeed tangents to facilitate reliable side transfer to and from adjoining conveyors without product tipping.

These Spirals are available in five different slat widths ranging from 6" to 20". They have a small footprint and provide considerable space savings when compared to conventional methods.



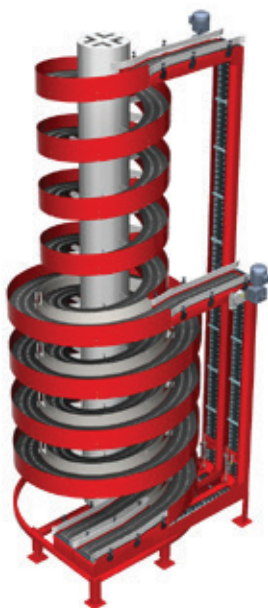
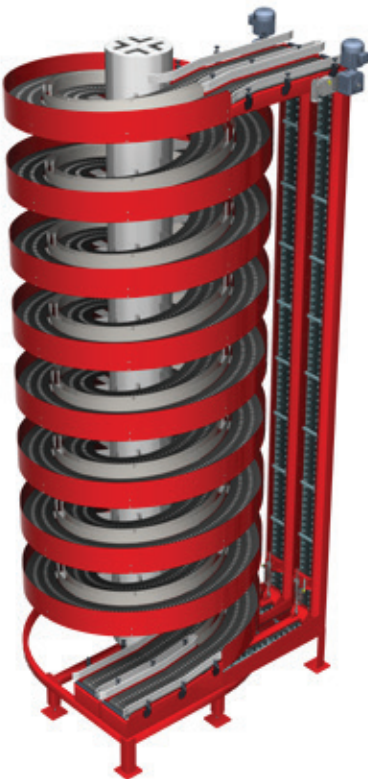
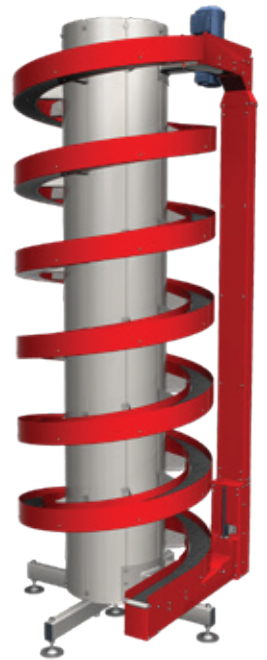
Narrow Trak Spirals:

The Ryson Narrow Trak Spirals are super compact vertical conveyors designed to handle small loads. They are great space savers with high throughput.

The nesting slats have the capacity to reliably end-transfer small cartons and packages or side-transfer small bottles or containers in a single file or in a continuous mass flow. All at speeds in excess of 200 FPM.

The Ryson micro-pitch transfer conveyor is slave-driven off the drive or idle-end shafts and is geared to match the speed of the spiral - even at high speeds. This transfer unit minimizes the unpowered gap between the spiral and adjoining conveyors, allowing smaller and lighter products to be end transferred into and out of the spiral.

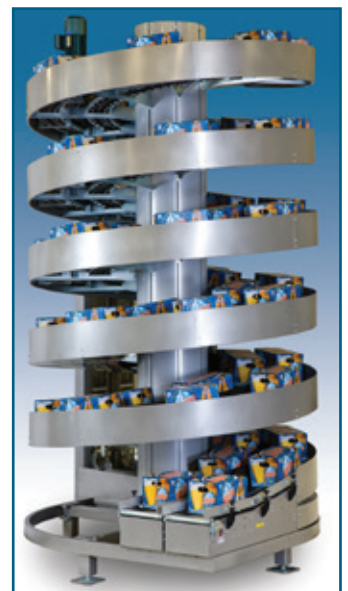
The Narrow Trak spirals offer a significantly larger elevation change capacity than what is currently available in the small package marketplace. They are also a good alternative to side gripper conveyors because they can run at high speeds and do not need to be adjusted for varying product sizes.



Dual Track Spirals:

The new Ryson Dual Track Spirals are the ultimate in space savings. Two tracks operate within one spiral structure. Each track has a separate drive and operates independently. Both tracks can go up or down and can be reversible.

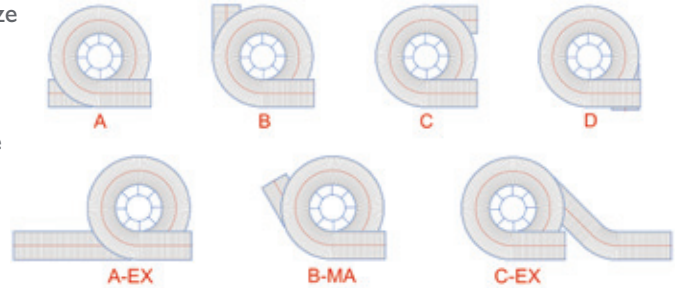
The two tracks of the Dual Track Spiral Conveyors do not have to feed in and out of the spiral at the same elevations, and can be applied very effectively to multi-level order picking modules or similar applications. The outside track serves the first level and the inner track the second level as illustrated in the examples to the left.



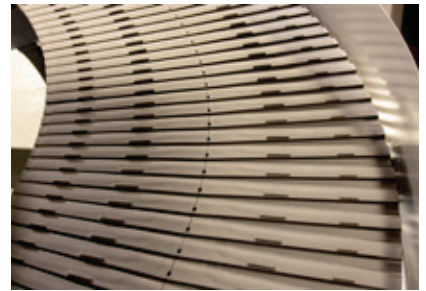
Features and Benefits:

Ryson Spiral Conveyors have many unique features and benefits highlighted in the following sections. Central to our design is the Ryson proprietary slat style belts designed with rolling friction without any sliding movements or wear-strips. This allows for high speeds, less energy, low noise, low maintenance and long life. Our value proposition is to deliver products with a low total cost of ownership.

Modular Design: An innovative modular design allows Ryson to customize with ease and can be economically modified in the field to accommodate changing needs. All spirals are made to order and are available in 4 basic configurations (A, B, C and D), accommodating most requirements relating to the location of the in and out feed tangents. All configurations can operate up or down in a clockwise or counterclockwise rotation and can optionally be reversible. The position and length of the in feed tangent on up spirals and out feed tangent on down spirals can be customized to meet specific layout requirements. Samples are shown above (A-EX, B-MA and C-EX).



Proprietary Slat Belt: This innovative belt enables a low rolling friction operation without any sliding movements or wear strips. The belt is pulled by a heavy duty steel roller chain and the slats are supported by precision steel roller bearings which ride on a polyurethane surface. This arrangement effectively takes up the side forces created by a tight radius and at the same time increases the load carrying capacity of the belt up to 75 lbs per linear foot. This enables the spirals to start and stop fully loaded and facilitates high speed, low noise and long life.



Overlapping Slats: Overlapping slats are used on the Unit Load and High Capacity Spirals, providing an efficient and safe conveying surface for cartons, cases, trays, totes and all sorts of packaged products. Available in 8", 12", 16", 20", 24", 26", 30" and 36" wide slats. Friction inserts can be optionally added when additional grip is required.



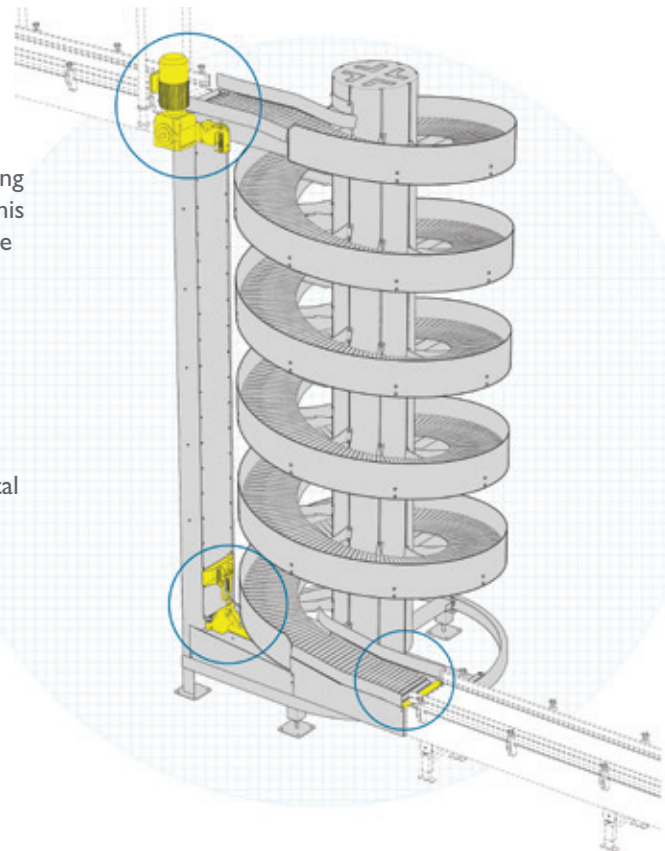
Nesting Slats: Nesting slats are used in the Mass Flow and Narrow Trak Spirals that convey small loads including loose bottles, cans, jars and similar containers. The conveying surface is flat without gaps, facilitating a smooth and reliable product side transfer. This can be done in a single file or in mass. They are available in 6", 9", 10", 16" and 20" wide slats.

Small Footprint: The proprietary low friction chain slat belt allow Ryson Spirals to operate within a small footprint, saving valuable floor space. See the chart on next page for specific dimensions on our most popular models.

Horizontal Entry and Exit: All Ryson Spirals are designed with a horizontal section at the in and outfeed. This assures a safe and reliable transition between the spiral and adjoining conveyors without product damage and undue wear.

Built in Protection: All Ryson Spirals are equipped with an automatic chain tensioning device and built-in overload protection as a standard.

One Drive: Only one drive motor is required, resulting in substantial savings in energy, controls and systems integration.



Easy to Install: Most spirals are shipped in one piece, pre-assembled and pre-tested, drastically reducing time and cost of installation.

Low Noise: Our proprietary chain slat belt assures a low noise operation, less than 75 db in most cases.

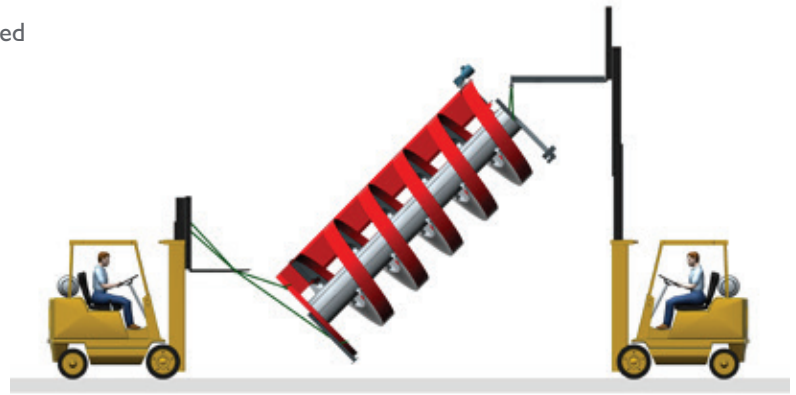
Easy to Field Modify: The Ryson modular design makes it easy to field modify our spirals in case of unplanned installation changes or to reconfigure and repurpose the spirals at a later date.

High Throughput: The spirals convey loads up or down in a continuous flow, facilitating high throughput. Many spirals can operate at speeds in excess of 200 FPM and are optionally reversible.

Low Maintenance and Long Life: The Ryson Spirals are designed for low maintenance and long life. Only high quality components are used throughout. All bearings are sealed for life and need no further lubrication. The chain is of heavy duty nickel plated construction and needs only infrequent lubrication. The slats are made of a nylon composite, need no maintenance and can easily be replaced as single components without the use of special tools. Ryson has a full staff of factory trained service technicians ready to assist. All of our service techs are PMMI Certified Trainers.

Controls and Integration: Most of our spirals are shipped without controls because they normally integrate with an overall conveyor control system. Our spirals always include an inverter duty gear motor and two proximity sensors, one for the automatic chain tensioner and one for the overload protection device. We offer a number of controls and pre-wiring options. Please refer to our website for more information.

A Variable Frequency Drive (VFD) is required for proper operation of the spirals. All Ryson Spirals are thoroughly shop tested prior to shipment, but depend on proper integration with the overall conveyor system for optimum performance. Spiral integration instructions are available on www.ryson.com or give us a call to request a copy.



Type	Outside Diameter	Centerline Diameter	Slat Width	Frame Width
I100-150-NT	4'-2" (1270)	3'-8" (1100)	6" (150)	6" (160)
I200-230-NT	4'-9" (1450)	3'-11" (1200)	9" (230)	9" (240)
I200-300	5'-3" (1600)	3'-11" (1200)	12" (300)	15" (380)
I300-400	5'-11" (1800)	4'-3" (1300)	16" (400)	19" (480)
I500-400	6'-7" (2000)	4'-11" (1500)	16" (400)	19" (480)
I600-500	7'-3" (2200)	5'-3" (1600)	20" (500)	23" (590)
I700-150 NT	5'-10" (1780)	5'-7" (1700)	6" (150)	6" (160)
I700-400-HC	7'-3" (2200)	5'-7" (1700)	16" (400)	19" (480)
I700-600-HC	7'-11" (2400)	5'-7" (1700)	24" (600)	27" (680)
I800-650	8'-5" (2590)	5'-11" (1800)	26" (650)	29" (730)
I900-260-MF	7'-5" (2260)	6'-3" (1900)	10" (254)	11" (280)
I900-400-MF	7'-11" (2410)	6'-3" (1900)	16" (400)	17" (430)
2200-760-WT	8'-5" (3060)	7'-3" (2200)	30" (760)	33" (790)
2300-500-MF	9'-4" (2840)	7'-7" (2300)	20" (500)	21" (530)
3000-900-WT	13'-0" (3970)	9'-10" (3000)	36" (900)	38" (970)

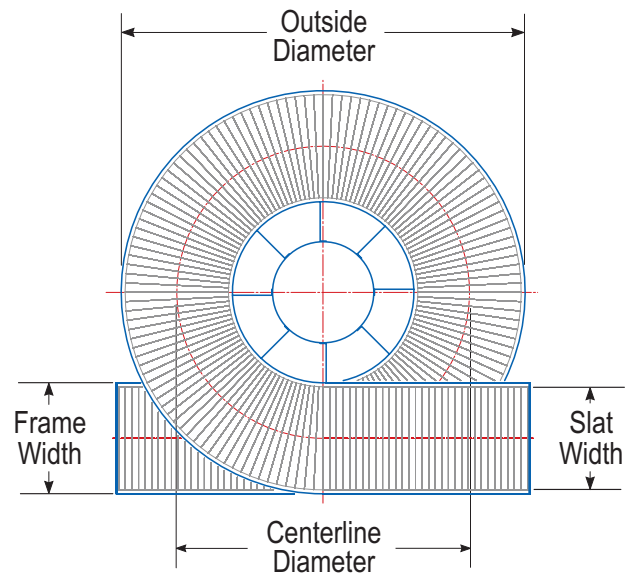


Chart displays the most common models.

Ryson Bucket Elevators

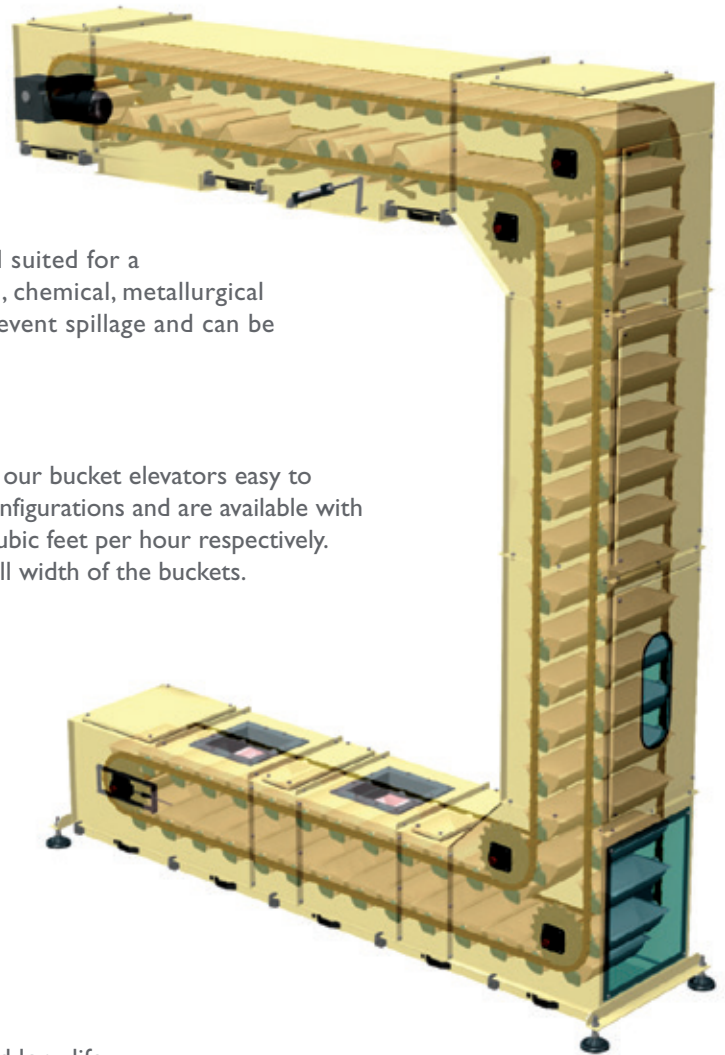
The Ryson Bucket Elevators combine vertical and horizontal transportation of bulk materials in one integral unit. They are of the totally enclosed pivoting bucket type and can have multiple inlets and outlets.

Gentle Handling:

Ryson Bucket Elevators are designed for gentle handling and are well suited for a broad range of bulk products in the food, agriculture, pharmaceutical, chemical, metallurgical and other industries. The buckets are overlapping at the inlets to prevent spillage and can be selectively tipped at the outlets.

Modular Design:

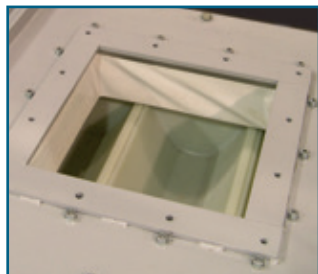
The Ryson modular design allows us to customize with ease and makes our bucket elevators easy to install and modify. The most common configurations are the C and Z configurations and are available with three different bucket sizes, yielding capacities up to 300, 700 or 1800 cubic feet per hour respectively. The buckets must be loaded with a controlled volume and across the full width of the buckets.



Rugged Construction:

The Ryson Bucket Elevators are designed for heavy duty operations and long life. They can be delivered in powder coated carbon steel, stainless steel or washdown versions. Elevators with multiple outlets have selective bucket tipping capabilities. This is accomplished by an air actuated tipping ramp. The last tipping ramp is always in a fixed position to assure that all buckets are emptied.

The chain is a 2" plated roller chain with hollow pin shaft and 1 1/8" diameter rollers. The rolling surface is made of polyurethane assuring smooth and quiet operation. The buckets are made of food grade reinforced polyamide, molded in one piece and can handle temperatures from -5 to +210 degrees Fahrenheit. Flanges are provided at the inlets and outlets to facilitate easy attachment of extended funnels, shoots or tubes.



About Ryson International



Ryson International, Inc. was founded in 1995 and specializes in Vertical Conveying Solutions. We manufacture a full line of Spiral Conveyors that can satisfy most vertical conveying needs, and a broad range of Bucket Elevators for conveying bulk materials. We also make various ancillary equipment for our product lines. Ryson is the number one manufacturer of Spiral Conveyors in the USA.

Our business philosophy is simple: Focus on quality and service, take good care of our employees and customers and develop products that minimize our customers' total cost of ownership.

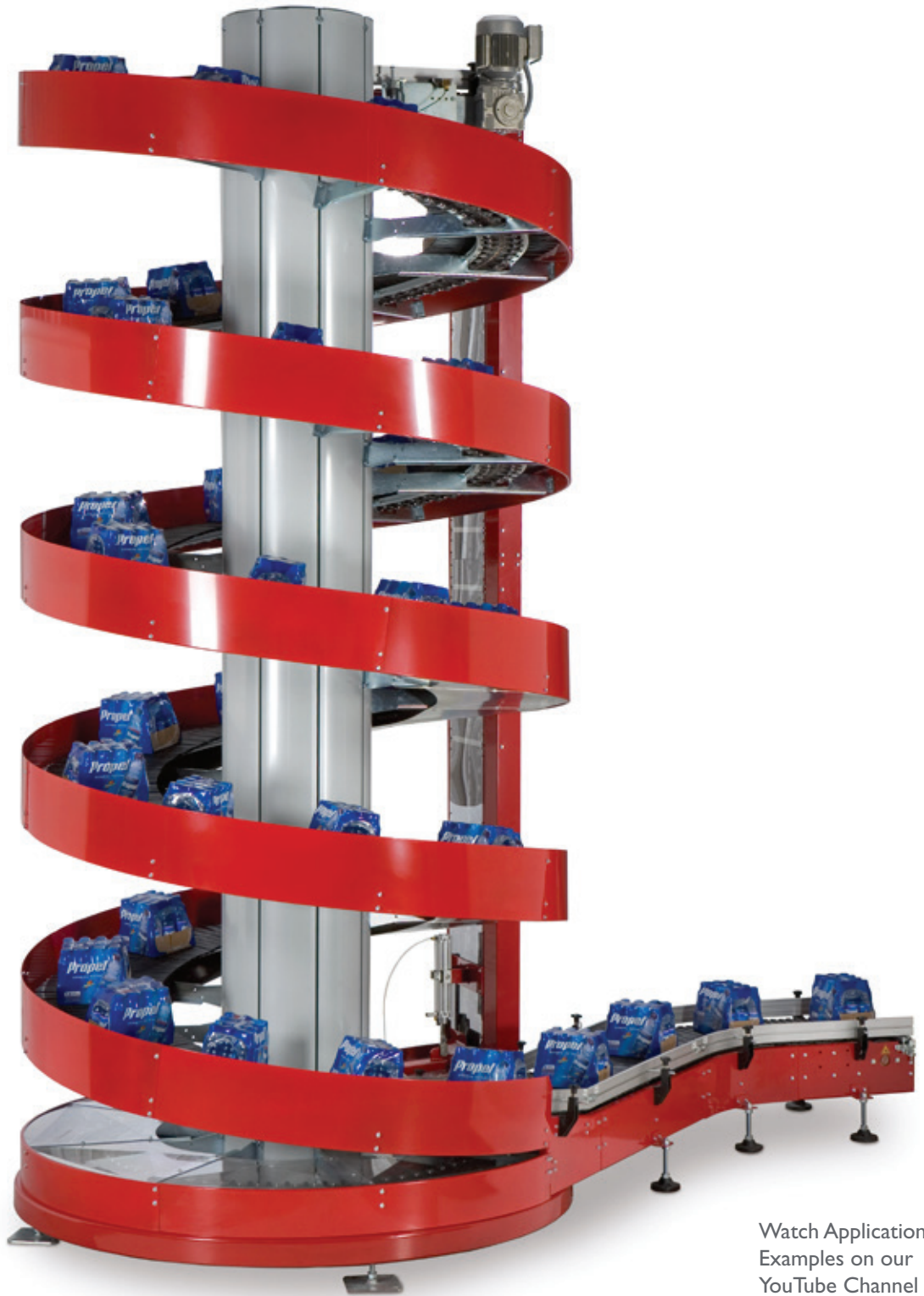
Ryson Spiral Conveyors need less floor space than conventional incline conveyors and are faster and more reliable than any elevator or lift. They are especially well suited for Consumer Packaged Goods companies and any Warehousing operations. All Spirals are available in powder coated carbon steel, hybrid, stainless steel, wash down, and freezer versions.

Ryson products are crafted with great care in our modern manufacturing plant in Yorktown, Virginia. Our full inventory of spare parts enables us to provide the high level of service our customers have come to expect from Ryson. We are committed to a continuous product development program. Our engineers are busy with research and development projects which include making improvements to our existing products.

Ryson manufactures in the US, and supports Canada, North and South America. Ryson is a part of Royal Apollo Group. Headquartered in Holland, and we have manufacturing and service operations in Holland, China, India and Thailand. As one global company we are the world's leader in Vertical Conveying.



For more information about our products and service, visit www.ryson.com or give us a call at 757.898.1530



Watch Application
Examples on our
YouTube Channel



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