



THE ELEGANT ACCUMULATION STRATEGY

HOW TO TRANSPORT ASSEMBLY PRODUCT
WITH OR WITHOUT WORKPIECE PALLETS

Accumulation conveyors are ubiquitous to belt and roller conveyors. These systems allow for the buffering of products either directly on the line or using workpiece pallets while moving items between process stages. Traditional power-and-free accumulation strategies are common in the packaging industry, but these approaches don't translate well when working with assembly products that require a gentler method of movement or transfer.

Power-and-free accumulation increases wear and tear on the conveyor components as backpressure increases with every stopped product. Harsh stops can lead to product damage while the increased friction required to compensate for the backpressure creates particulate discharge. When regulating the flow of products in assembly operations, these conditions can lead to a host of problems. Due to the increased wear, power and free conveyors require more maintenance, suffer more breakdowns, and consume more electricity.

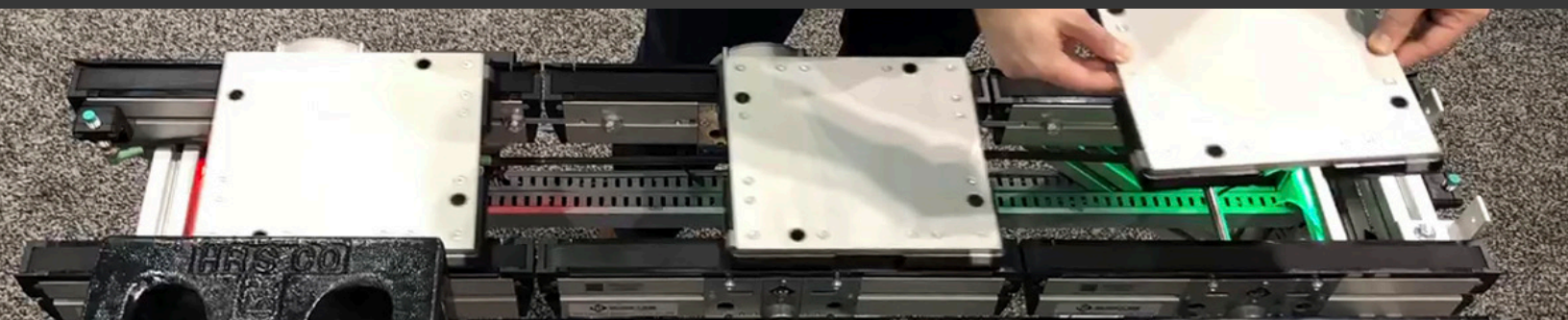
Because of these limitations, Glide-Line developed our Zero Contact Zoned Conveyor for elegant accumulation at various sections on the line. The design includes gentle stops and smooth starts for product assembly operations with or without workpiece pallets.

Palletized systems are a traditional accumulation approach when you cannot easily separate individual products on the line. The use of Zero Contact Zoned Conveyors eliminates this need and gives you the freedom to accumulate products without compromising on space, control, or efficiency.

In this eBook, you will learn everything you need to know about Zero Contact Zoned Conveyor's accumulation capabilities, and we will discuss the benefits available for assembly products from this design.



**ZERO CONTACT ZONED CONVEYORS
ELIMINATE THE NEED FOR POWER-
AND-FREE ACCUMULATION DESIGNS
THAT ADD FRICTION TO THE LINE,
INCREASING THE WEAR AND TEAR OF YOUR
CONVEYOR COMPONENTS.**

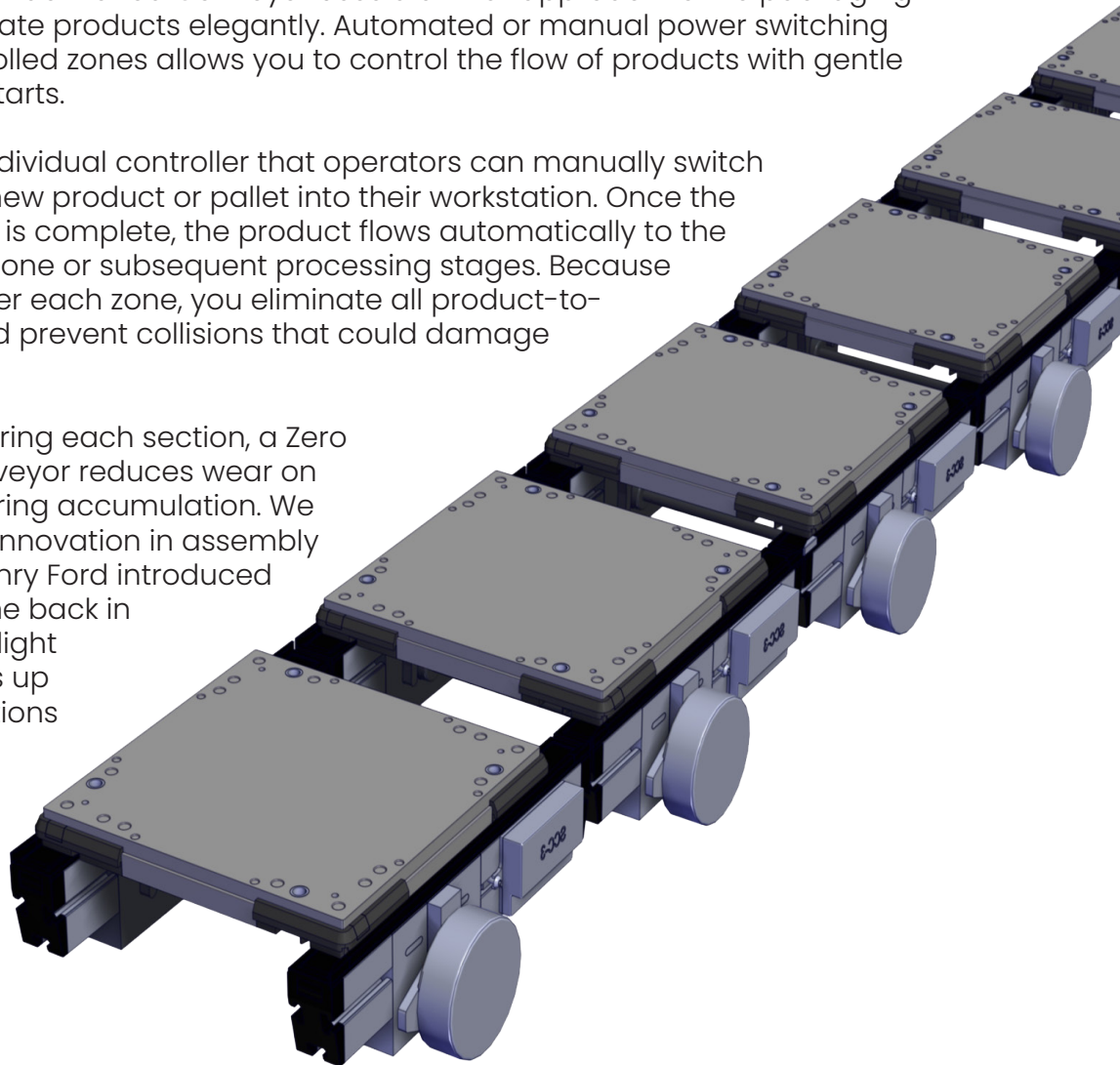


HOW A ZERO CONTACT ZONED CONVEYOR IMPROVES ACCUMULATION STRATEGIES WITH OR WITHOUT WORKPIECE PALLETS

Glide-Line's Zero Contact Zoned Conveyor uses a similar approach to the packaging industry to accumulate products elegantly. Automated or manual power switching of individually controlled zones allows you to control the flow of products with gentle stops and smooth starts.

Each zone has an individual controller that operators can manually switch on or off to bring a new product or pallet into their workstation. Once the assembly operation is complete, the product flows automatically to the next accumulation zone or subsequent processing stages. Because you have control over each zone, you eliminate all product-to-product contact and prevent collisions that could damage your assemblies.

By individually powering each section, a Zero Contact Zoned Conveyor reduces wear on the components during accumulation. We believe it's the best innovation in assembly operations since Henry Ford introduced the first assembly line back in 1913. Ok... maybe a slight exaggeration but it's up there on the innovations list along with these Custom Standard Solutions.





For manufacturers, common challenges with traditional accumulation strategies include:

- **Increased downtimes** – Shutdowns to perform maintenance or effect repairs increase due to increased wear
- **Reduced cleanliness** – As particulates will accumulate on the conveyor, keeping the line clean requires more effort
- **Greater energy consumption** – Because you have to power the entire line during accumulation, the system uses more electricity compared to a Zero Contact Zoned Conveyor
- **Limited design flexibility** – The space required for the layout of the line (especially when including transfers) increases when using a power-and-free accumulation design
- **Product damage and scrap** – When using bump stops, there is always a risk that these harsh maneuvers will damage products or knock items off of their pallets

A Zero Contact Zoned Conveyor overcomes these challenges with complete control over each zone, reduced maintenance and power consumption, as well as providing space savings, and remaining flexible enough for improved integration and automation throughout the line.



GLIDE-LINE'S ZERO CONTACT ZONED CONVEYORS GIVE YOU **PRECISE CONTROL OVER EACH ASSEMBLY'S ACCUMULATION. WITH A SIMPLIFIED CONTROL SCHEME, PRODUCTS ACCUMULATE WITHOUT EVER TOUCHING, AND YOU CAN CONFIGURE THE SYSTEM ACCORDING TO YOUR EXACT ACCELERATION, DECELERATION, AND SPEED REQUIREMENTS.**

BENEFITS OF USING A ZERO CONTACT ZONED CONVEYOR FOR PRODUCT ACCUMULATION

Our Zero Contact Zoned Conveyors are ideal for direct product handling or palletized workpieces. This elegant solution simply eliminates the bumps and collisions between products or assemblies, reducing the risk of product damage during accumulation.

For most direct product handling and palletized applications, the Timing Belt with our Zero Contact Zoned Conveyor is ideal as it provides sufficient friction with increased product control. You can configure the system to use DC (for lighter loads) or AC (when you need more power) drives.

When looking at the different available options, consider these design elements:

- The 24V DC drives are brushless, requiring zero maintenance to remain operational
- Zero-pressure logic built into the driver cards reduces wear while maintaining the required friction
- The bearings used in the motors have a 300,000-hour operational lifespan
- Running the line ensures less downtime, increased energy efficiency, and no product damage

We also allow you to configure your ideal solution with our IMPACT! configurator, shortening your lead time and allowing us to provide a detailed quote for any kind of application.



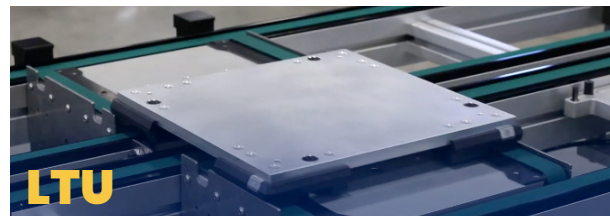
ELEGANT ASSEMBLY ACCUMULATION AND CONTROL WITH CUSTOM STANDARD SOLUTIONS

Along with our Zero Contact Zoned Conveyors, we provide a host of different customizable standard solutions that enable unmatched product control and manipulation of any kind of assembly. The system's design can accommodate different elements to lift, rotate, or transfer your products between different lines and processing stages.

Some of the solutions you can integrate with your line include:



Our Drop and Rotate Transfer (DART) unit provides smooth and precise positioning with servo-driven rotation without violating the space between the conveyor strands



We have multiple types of Lift and Transfer Units (LTUs) for different applications including pass-through, multiple positions, dual deck, tilting deck, and dual axis solutions



For elegant transfers between lines, our AMR toppers come with an open-center design for seamless movement at different interface points



Ideal for when you need to expertly transfer and rotate items from the assembly line, a Conveyor Rotate Unit (CRU) allows you to turn entire conveyor sections

Glide-Line remains committed to solving your unique problems. Along with our elegant accumulation conveyors, we can integrate a variety of material handling or pallet handling solutions into your line to increase your throughput and maximize your uptimes. You can manage your line expertly with a Zero Contact Zoned Conveyor that completely eliminates the possibility of product damage.

With the flexible, modular system design, you can create the ideal accumulation strategy for your assembly products.



THE FLEXIBILITY AVAILABLE FROM OUR ZERO CONTACT ZONED CONVEYORS PROVIDES MANUFACTURERS WITH AN EFFICIENT, ELEGANT ACCUMULATION SOLUTION FOR ASSEMBLIES WITHOUT A WORKPIECE PALLET. THE MODULAR, SEGMENTED DESIGN MAKES IT EASIER TO PROGRAM THE CONTROL LOGIC AND KNOW WHERE ANY PRODUCT IS AT ANY TIME ON THE LINE.

SOLVING YOUR UNIQUE CHALLENGES WITH AN ELEGANT ACCUMULATION CONVEYOR WITH PRECISE CONTROL

Traditional accumulation techniques can harm your products and increase the wear on your equipment. Glide-Line continues to deliver innovative designs that solve unique challenges in assembly operations. Our Zero Contact Zoned Conveyors make it possible to move each assembly through your different process stages without ever colliding with any upstream products.

Whether you use workpiece pallets or need a solution to handle products directly on the line, Glide-Line can assist with an automated, integrated, and precise conveyor solution. Glide-Line makes material and product handling with fast, flexible, and easy designs.

If you need to solve advanced accumulation problems with a Zero Contact Zoned Conveyor,

GET IN TOUCH WITH GLIDE-LINE TO GET STARTED ON YOUR DESIGN