

WHEN SHOULD I USE OMNI METALCRAFT CORP. ZERO PRESSURE CDLR?

WHAT IS ZERO-PRESSURE CDLR?

Zero Pressure CDLR is a chain driven roller conveyor divided into individual zones controlled by air logic. When a product reaches the sensor in the last unoccupied zone, the zone is disengaged and the preceding zone is armed. When the next product trips the sensor in the preceding zone, that zone is disengaged. This sequence repeats itself until all zones are full. When a load is removed from the conveyor's discharge end, preceding zones will "cascade" forward one at a time.

WHAT ARE THE BENEFITS OF ZERO-PRESSURE ACCUMULATION?

- Reduced horsepower requirements.
- Minimized product damage from handling.
- Eliminates the need to index by jogging or starting and stopping the motor which reduces power consumption, increases throughput and utilizes space more efficiently.

WHAT INDUSTRIES AND MARKETS USE ZERO-PRESSURE ACCUMULATION?

- Manufacturing – assembly
- Automotive – component storage and delivery
- Warehouse and distribution – pick lines, shipping and receiving

WHAT ARE SOME TYPICAL APPLICATIONS OF ZERO-PRESSURE ACCUMULATION?

- Workstations
 - Fill stations
 - Inspection stations
 - Order fulfillment stations (pick lines) etc.
- Singulation style release:
 - Feeding a stretch wrapper.
 - Feeding a turntable.
 - Feeding a right angle transfer.
 - Feeding vertical conveyors (RVC, CVC).
- Temporary storage

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PROCEDURE FOR SPECIFYING A ZERO PRESSURE CDLR

- Review the product to be certain that it is suitable to be conveyed on rollers.
- Review the atmosphere the system will function in. If it is extreme wash down, extreme cold, heat, or abrasive, clutch driven zone will not be recommended.
- If product is conveyable, the weight is within our parameters, and the conditions are acceptable, then we use the product weight to determine the proper roller size and roll centers for the conveyor.
- Generally the roller size will determine what size chain we use for the roller to roller chain as well as the zone to zone chain.
- The size of the product will determine the length of the zone. Zero pressure starts to become cost effective when three or more zones are utilized
- Generally we take the product length plus 12" for the zone length as this allows for product coast. If the product needs to be stopped with a degree of accuracy in its zone we will use a clutch brake to stop the product as soon as the rollers stop driving. This will allow shorter zones as the product coast will be reduced.
- We offer sensor roller, photo eye and valve, or Sick Optics logic systems for our controls packages. The product size and weight will generally determine the correct package to be used. The following characteristics of each option will help you in choosing the best controls offering for the application

SENSOR ROLLER CONTROL

- Integrated logic
- Cascade style accumulation and release
- Solid surface along length of product required
- Customer cost to integrate with other equipment: Low
- Standard options for loading, unloading, transferring, workstations, etc.
- Customer must wire to end zone and motor
- Conveyor cost: Low
- Trigger mechanism limited in bad environments
- Minimum product weights
- Non-reversing
- Easily integrates with other operations
- Time involved for installation: Low
- Number of custom options available: Low

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SICK OPTICS

- Integrated logic
- Cascade style accumulation and release
- Handles most products conveyable on rollers
- Customer cost to integrate with other equipment: Medium
- Standard options for loading, unloading, transferring, workstations, etc.
- Customer must wire to power supply, end zone and motor
- Conveyor cost: Medium
- Limited photo eye types
- Non-reversing
- Easily integrates with other operations
- Time involved for installation: Medium
- Number of custom options available: Medium

PHOTO EYE & VALVE

- No logic (customer is responsible for all operation)
- Handles most products conveyable on rollers
- Customer cost to integrate with other equipment: High
- No standard interface options
- Customer must wire valve and photo-eye in each zone, provide all logic, and wire to the motor
- Conveyor cost: High
- Reversible
- Time involved for installation: High
- Number of custom options available: High