



Case Studies : Decoma Polycon - Division of Magna



Automotive Storage and Retrieval System

The Company: Polycon Industries of Guelph On. (A division of Decoma of which Magna International is a majority shareholder.)

The Line: Fascias (bumpers) for Ford Crown Victoria and Mercury Marquis.

The Situation: Polycon needed to store bulky and painted bumper fascias in under 8,000 square feet of warehouse space, to be assembled and shipped, for just in time, and fully sequenced delivery to Ford's Assembly Line in St. Thomas, Ontario.

Our Track Record: Mainway's reputation for quality workmanship and extensive experience with fascia handling.

The Challenges:

1. J.I.T. sequencing for many unique colours and car models.
2. Severe space limitations – very dense storage required.
3. Delivery of fascias to the storage system after painting and to the assembly area as required for shipping.
4. Handling a fully finished fascia without damaging painted surface.

The Solution: Working closely with Polycon, Mainway designed and installed a four level, 32 foot high mezzanine and seven different types of conveyor systems seamlessly integrated to carry painted bumpers from the paint line to the assembly line.

1. A vacuum formed plastic tray was developed to hold individual fascias.
2. An overhead monorail conveyor transports fascias from the paint line to the mezzanine.
3. Personnel walkways for loading and unloading surround mezzanine structure.
4. Bumpers are manually loaded onto plastic trays, then stored in one of 112 storage lanes, which are pneumatically controlled, minimum pressure gravity flow conveyors.
5. Order pickers retrieve fascias in sequence dictated by auto assembly plant's build schedule.
6. Fascias and slave pallets are transferred to standard powered belt conveyor.
7. This feeds into " The Water Slide, " a spiral table top chain conveyor system, which efficiently brings parts down from all four levels within space constraints.
8. The " Water Slide" feeds into four short accumulating gravity flow conveyors which deliver the fascia to the assembly line.
9. A Gravity Roller Conveyor that feeds a vertical chain conveyor serves as a bypass system to supply replacement bumpers for blemished or out of sequence fascias.
10. Slave pallets are returned to four mezzanine storage levels using Powered Roller Conveyor in-feeding a reciprocating vertical conveyor.

The Results : Mainway's low maintenance In Line Vehicle Sequencing system



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