Classifying Modular Conveyor Systems

Authentic modular conveyors provide manufacturers with an off-the-shelf customizable conveyor. Beyond the initial cost savings, DynaCon modular conveyors are shipped as modules reducing freight costs.

Type into any Internet search engine the term “modular conveyor” and you will see a long list of manufactures that label their conveyors as such. Using a simple definition from the Merriam-Webster dictionary for modular, “constructed with standardized units or dimensions for flexibility and variety in use,” it would appear that all conveyors are modular in design.

However, in examining that definition, one might suppose that they key term in that definition is “for flexibility.” Perhaps a more accurate definition of what manufacturers seek when searching for modular components is taken from the Encarta dictionary for modular, “made up of separate modules that can be rearranged, replaced, combined or interchanged easily.”

The latter definition gives manufacturers straightforward criteria to discern between authentic modular systems that can be rearranged, replaced, combined and interchanged easily and those modular systems that are simply pre-engineered and offer little or no ability to form different structures or systems.

Combining Modules

To combine something assumes that you can join or mix those things together. With engineering expertise, nearly any piece of equipment can be altered to fit a process; however, the concept of modularity supposes that modules are easily combined to form different structures.

Comparing pre-engineer modular conveyor systems to authentic reconfigurable modular systems is like comparing Lincoln Logs ™ to Legos ®. Lincoln Logs come in a limited amount of fixed length pieces with a standard groove that limits configuration choices, whereas Legos come in a variety of lengths, heights, and

supplementary pieces that can be snapped together at staggered intervals to achieve a desired result.

Just as Legos provide ultimate reconfigurability, the key factor in an authentic reconfigurable modular conveyor system is the ability to connect and reconnect a wide variety of modules and accessory modules that allow engineers the freedom to tweak production lines when necessary without the cost of a brand new conveyor or the risk of losing the conveyor's integrity.

For modular systems to be considered authentic modular systems the conveyor line should include hundreds of conveyor modules and accessories that are plug-and-play and the modules should come in a variety of lengths. While most manufacturers of pre-engineered "modular" conveyors offer varying lengths, research revealed that some of the shortest lengths available were 18 inches long.

Manufacturers that stay true to the premise of true modularity, offer lengths as small as 6 inches in varying widths.

Interchanging Modules

When something is interchangeable it means that two or more things can be put in the place of another. When making productivity improvements or streamlining operator utilization, the ability to interchange modules to alter work cell layouts is the ideal scenario for manufacturers. With authentic modular systems, modules can be added or subtracted without the need to purchase entirely new conveyors.

Interchangeability also allows manufacturers to share equipment between facilities. Some organizations use DynaCon modular conveyors to standardize conveyor systems used in their plants allowing them to call other facilities if they need a

particular module.

From an engineering standpoint, authentic modular conveyors are easy to reconfigure allowing manufacturers to do more on their own without the need to hire outside engineering firms.

Because authentic modular systems are designed to be interchanged with other equipment and have external drives, the systems' programmability offers unprecedented ability to interface with auxiliary equipment such as robotics.

A Self-Contained Design

When something is self contained it is assumed that it can function independent from other equipment. Traditionally conveyor systems, even so-called modular systems, come with standard internal drives and motors, forcing engineers to battle with getting the controls to work within their own system. With pre-engineered modular systems, the conveyor is specked out at the factory and virtually inadaptable to new equipment. Self contained yes, but often inadaptable.

Authentic modular systems offer drive systems and motors that are external, allowing engineers the option to purchase the motors with or without the drive system, giving them the flexibility to use their existing controls to manipulate the conveyors.

In addition, when drives and motors fail on most conveyor systems, it is not uncommon that replacements for a particular model are unavailable, leaving the conveyor useless.

Authentic modular systems accommodate engineering departments' desire to purchase AC or DC motors as modules that integrate with their system. When motors are sold as modules it allows facilities to have replacements on hand without having to store a lot of extra equipment and authentic modular systems fit that need.

Rearranging to Change Order or Position

The ability to rearrange appears to bear some similarity with the ability to interchange two pieces, however, the ability to take several modules and change their position or order takes the concept of interchangeability a step further.

When organizations expand product lines, or add sophisticated automation equipment to their line, entire processes might need to be moved to another area such as another floor. Manufacturers should look for modular systems that are easily re-arranged with snap-in-place technology allowing an array of configurations.

When rearranging work areas, sometimes flow is reduced leaving excess conveyor parts. Where three conveyors may have been needed previously, it is possible that only two are needed with the new layout. With authentic modular systems, there is no reason for excess conveyor modules to go to waste. The excess parts are able to be re-utilized and reconfigured for use in another area of the plant.

Replacements

In any manufacturing facility accidents occur from time to time. When damage does occur to typical conveyors or pre-engineered modular systems the entire conveyor may need to be replaced and can affect production for weeks.

Authentic modular conveyor systems allow manufactures to take modules from inactive systems and put it in the place of damaged module with minimal downtime. And with most authentic systems, modules can be purchased and replaced within 24 hours, so there isn't the need to sacrifice one process for another.

When choosing a conveying system manufactures should examine modular conveyors that have the ability to be rearranged, replaced, combined or interchanged easily.

For more information, please visit www.dynamicconveyor.com *[1].*

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