Stainless Steel Connection System Surpasses Performance and Reliability Expectations for Global Manufacturers of Food & Beverage Process Equipment

BUSINESS CHALLENGE

Global manufacturers of food and beverage process equipment involved in the logistics, processing, filling and packaging industries face many challenges. Since their products are for human consumption, they have to deal with a wide range of regulations regarding food safety and cleanliness in a usually wet environment that can wreak havoc on processing machinery. In addition, every piece of equipment is connected by a system of conveyors, belts or fasteners. Maintaining the processing lines to ensure continuous flow with no shutdowns requires constant attention, special skills and extensive training.

In addition, threaded grooves in traditional M12-based hard-wired systems can allow the lodging and transfer of bacteria, ingredients and other foreign materials that can contaminate a processor’s end products. To meet stringent food safety regulations and standards, processing and control units must be capable of withstanding frequent high-pressure wash-downs and must be designed and built to prevent possible cross-contamination.

As a result of these challenges, the equipment manufacturers and others in the packaging industry often find themselves on the cutting edge of technology.

SOLUTION

Through its Brad product line, Molex has been serving this industry for decades to ensure that modifications to processing equipment achieve a smooth, seamless transition and offer the most innovative technology in the market. To avoid costly downtime when performing cleaning, maintenance or adding additional pieces of equipment to the production line, process manufacturers require all packaging machines to be flexible and reliable. This is done in order to get the finished goods out at the far end of the line quickly and efficiently. Molex’s specially designed Brad products greatly reduce the installation time of wiring the local control unit. Furthermore, the connections must meet the strict sanitation regulations of the food and beverage industry, and withstand the operational demands of plant sanitation wash-downs and foam cleaning.

BENEFITS AND ROI

The Brad Ultra-Lock Stainless Steel Connection System enables fast and easy commissioning of machinery. Simply push down to connect. Compared to hardwiring, the innovative, threadless, “push-to-lock” technology reduces ergonomic stress and delivers enormous labor time savings when installing and maintaining the control unit. Designed with one sealing surface, the connectors ensure optimum performance, even in harsh, wet environments. The Ultra-Lock Stainless Steel Connection System was specially designed to meet the stringent standards of the food and beverage industry and to provide a highly reliable connection system.

- **Material Compatibility**: High material compatibility with a multitude of wash-down chemicals used throughout the food and beverage industry.
- **IP69K Industrial Strength Seal**: With its radial seal and the “push-to-lock” technology, the Ultra-Lock Stainless Steel Connection System is reliable and operator-independent. It creates a repeatable IP69K seal that can withstand washdowns up to 100 bar (1500 psi) with one push.
• **316 Stainless Steel Couplers:** Smoothsurfaced 316 stainless steel construction and threadless connectors help prevent bacterial growth by limiting the areas where it can collect.

• **Flexibility and Reliability:** The simple “push-to-lock” technology enables fast and easy installations that manufacturers can rely on to avoid costly downtime when adding more equipment to the production line.

With the Ultra-Lock Connection System, processors can realize a rapid return on investment due to decreased assembly/disassembly time and labor costs. Using the system also results in increased production uptime with less risk of intermittent or loose connections versus traditional M12 connection systems.

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