

# The Next Stop on the **Lean Road**

Businesses opt for returnable packaging to save costs and improve operating efficiencies. BY **THOMAS R. CUTLER** AND **DAVID MADDEN**

**A**s industrial automation continues down its lean manufacturing journey, the area of packaging waste has taken centre stage. Now you see virtually every Fortune 500 company, especially automotive Tier 1 manufacturing suppliers, consumer product manufacturers, scrap steel businesses, distribution and freight companies utilizing returnable packaging services. After optimizing plant floor operations, it is this type of creative packaging purchasing that empowers independent equipment dealers and industrial end-users to eliminate another element of waste in their business models.

The EarthWorks Group estimates that plastic and paper packaging account for 30 per cent of landfill waste. The use of cardboard products and other one-time-use packaging products contribute significantly to this waste. One way to cut down on this packaging waste is to use returnable packaging more often. Folding bulk containers, industrial totes and metal storage bins can be used repeatedly within a facility, or between a supplier and a customer. Bulk boxes are much cheaper in the long term when compared to buying cardboard boxes and wood crates every time a product is shipped.

## Plastic Pallets

Product offerings include many standard and common reusable packaging solutions, including, but not limited to plastic totes, plastic collapsible bulk boxes, metal containers, wire baskets and plastic pallets. As a component in continued process improvement, returnable packaging empowers companies to reduce packaging acquisition costs through access to used returnable packaging inventories.

Plastic pallets come in a couple of varieties. For the most part, they are made from structural foam, but there are also thermoform pallets available. The structural foam pallets are more rigid and durable than the thermoform version. Usually, the more rigid plastic pallets are paired with an HDPE (high-density polyethylene) plastic returnable tote in order to create a plastic container pallet. This pairing works well, because structural foam plastic pallets

typically have a shorter lip around the edge of the pallet and the totes fit perfectly within the lip. To finish off the combination, a pallet cover is used to make the plastic container pallets stackable on each other.

By comparison, when using plastic corrugated (typically a custom made tote), the thermoform pallet is a better choice, because it uses a much higher lip height. The higher lip height on the thermoform pallet catches tote edges easily.

Plastic pallets can also be used as export pallets. Due to export pallet requirements, any wood pallets must be heat treated; while plastic pallets circumvent these requirements. Used plastic pallets for export make a lot of sense from a cost perspective, given that export pallets will rarely be returned to the company.

## Making Economic Sense

While the upfront investment in returnable packaging is higher, savings can be realized quickly through repeated use, less labor (no more box assembly), reduced material handling (fewer moves from stackable containers), higher quality (fewer rejects due to damaged packaging), and optimal use of floor space (plastic and metal containers can stack very high). The per piece packaging costs for used bulk containers and totes can be as low as 5 per cent of the costs for a comparable expendable solution, depending on shipping volumes.

Increasingly companies will convert their entire operations to returnable containers as part of a their lean manufacturing methods. Improving packaging, transportation and line-side presentation of containers are becoming the specific goals of the returnable packaging methodology. Such a program will axiomatically benefit the environment by virtually eliminating waste from expendable packaging, even while improving the bottom-line. ■

Thomas Cutler is a US-based journalist covering the manufacturing and supply chain industry.

David Madden is Sales Manager at Container Exchanger, an online marketplace for used returnable packaging.