



CASE STUDY: ALPAL Bulk Container Redesign

Background & Challenge

ALPAL, a company specializing in reusable bulk containers, identified a significant gap in the market for a container combining the flexibility of a flexible intermediate bulk container (FIBC) and the rigidity of an intermediate bulk container (IBC). The initial goal was to create a container that could collapse for efficient return transport while still being sturdy enough to stack up to 8 units high for optimal storage. Despite strong interest in the product, sales did not meet expectations, primarily because packaging was not a core business for potential customers and was deprioritized in CAPEX decisions. Additionally, ALPAL needed to become more price competitive compared to traditional packaging solutions like corrugated boxes and wooden pallets.

Solution & Results

The solution involved a comprehensive redesign of the ALPAL bulk container, which reduced the price by 15%, from \$200 per unit to \$170 per unit. The redesign eliminated over-engineering by simplifying the structure to allow stacking up to 6 units high, which addressed ceiling height limitations in many facilities. Key changes included the relocation of steel poles to the ringbeam, which led to a smoother, more easily cleaned pallet base, and design improvements for easier assembly and disassembly, reducing labor costs and improving automation potential. The result was a more affordable and functional solution that opened up new market potential.



Market(s):

Agriculture
Industrial
Food

Solutions:

The redesigned ALPAL simplifies costs, improves stackability, reduces contamination, enhances handling, and supports future IoT integration.

Key Outcomes:

- 15% price reduction, saving \$30 per unit.
- \$58,535 in packaging and transport savings per season, and up to \$270,336 in annual labor savings.
- 50% reduction in assembly time, saving \$32,000 per employee annually.
- Transitioning to 100% recycled materials, supporting sustainability.