



STIHL Inc. Eliminates 760 Tons of Corrugated Annually While Improving Operational Efficiency

STIHL Inc. is the leading manufacturer of power tools for landscape maintenance and forestry. The Company is dedicated to protecting the environment through the development of powerful, fuel-efficient outdoor power equipment and environmentally responsible production practices. They identified the need for a more efficient, sustainable way to move components from one production line to another and to ship and exchange components with other manufacturing facilities within the STIHL Group, both domestically and internationally. By replacing corrugated cartons with standardized KTP GP3 reusable plastic containers, they realized significant cost savings, a favorable payback on container purchases and required machinery modifications, reduction in material handling, forklift traffic, and down-time, along with improved inter-company inventory balance and component exchange...all while reducing the amount of cardboard returned for recycling by over 760 tons annually.

MEASURABLE IMPROVEMENTS:

- Eliminated 760 tons of corrugated annually
- Reduced cardboard transport box purchases by 59%
- Standardized packaging components
- Reduced material handling and forklift traffic
- Improved operational efficiency and delivery reliability
- Significant savings with favorable payback



The Challenge

Historically, STIHL moved components between production lines and other manufacturing locations in corrugated boxes. This meant purchasing, and then managing the waste associated with, nearly 1.3 million tons of corrugated annually. As a company committed to responsible environmental practices, STIHL wanted to find a way to reduce cardboard waste and, at the same time, improve operational efficiency and reduce cost. While converting to reusable transport packaging was the intuitive solution, there were several critical operating factors that had to be addressed and financial investment hurdles that had to be met before making a conversion of this magnitude:

- The ongoing cost of cardboard boxes vs. the up-front investment in reusable containers
- The scalability of transport packaging volume for peak production times
- Machine modifications required for implementation and automation, including container handling equipment, dispensers, and conveyance
- Unique export packaging requirements

The Goal

The STIHL Inc. goal was to identify, quantify, and implement an alternative transport packaging system that would allow them to reduce cardboard waste while improving operational efficiency and reducing cost. This would contribute to the achievement of their environmental and fiscal performance goals, in a manner consistent with their core value of employing sustainable business practices.

The Solution

STIHL Germany had recently implemented the KTP Packaging Solutions GP3 Super Quad Box within their local operations. Standardizing to the GP3 globally would enable nearly balanced inter-company reusable packaging exchange without having to repack components at various facilities. It would also allow for standardized packaging of individual components. Structure, function, and performance tests were conducted to confirm feasibility across the various types of components and to identify required operational modifications. Detailed financial analysis was performed at various volume scenarios and sensitivities, based on long term plan production requirements.



BEFORE: Corrugated Transport Boxes



AFTER: REUSABLE TRANSPORT SYSTEM
(KTP Packaging Solutions GP3 Container)

Based on positive outcomes from this comprehensive analysis, STIHL initiated a two-year implementation plan, making the necessary automation and handling equipment changes and transitioning from cardboard transport packages to the GP3 containers.



The Impact

By the end of 2018, STIHL will eliminate 762 tons, or 59%, of their annual corrugated box requirement, while realizing significant operational improvements and cost savings with a favorable payback. The material handling, forklift traffic, and clean-up associated with cardboard waste management has been dramatically reduced. Packaging standardization has improved inventory management and delivery reliability. The transition to reusable transport packaging has not only reduced waste, but also allowed for new efficiencies within the STIHL production process.

"At STIHL Inc., environmental stewardship is part of our core values and we continually seek ways to improve our environmental impact and employ sustainable business practices. We are proud of the fact that our reusable packaging not only reduces waste, but also allows for efficiencies in our production process."

-- Herbert Taute, Manager of Industrial Engineering and Continuous Improvement for STIHL Inc.



About STIHL Inc.

STIHL Inc. manufactures the number one selling brand of gasoline-powered handheld outdoor power equipment in America,* as well as the number one selling brand of chain saws in the world. STIHL is also the number one selling brand of gasoline-powered handheld outdoor power equipment among U.S. landscape professionals.** STIHL products are sold through servicing power equipment retailers from coast to coast – not big box stores. Located in Virginia Beach, Va., STIHL Inc., the headquarters for U.S. operations for the worldwide STIHL Group, exports to over 90 countries around the world; the majority of STIHL products sold in America are also built in America.***

*"Number one selling brand" is based on syndicated Irwin Broh Research as well as independent consumer research of 2009-2016 U.S. sales and market share data for the gasoline-powered handheld outdoor power equipment category combined sales to consumers and commercial landscapers. **"Number one selling" claim based on 2007-2016 syndicated Irwin Broh Research of the U.S. professional landscaper market. ***A majority of STIHL gasoline-powered units sold in the United States are built in the United States from domestic and foreign parts and components.

About the Excellence in Reusable Packaging Award



The Reusable Packaging Association (RPA) Excellence in Reusable Packaging award recognizes companies and organizations that have developed and implemented innovative and measurable reusable packaging solutions in a business-to-business supply chain. 2017 marks the 6th year for this annual award program. Submissions are reviewed by an independent panel of judges who are not members of the RPA. The Reusable Packaging Association promotes the use and value of reusable transport packaging systems. It is a non-profit trade association of leading manufacturers, poolers, distributors, retailers, educators, and others with a commitment to reusable packaging systems and the message of reuse.