

The Benefits of a Total Cost of Ownership Audit

A Case Study for Makita

Weedon

Packaging Solutions Centre

Customer Profile

Makita Corporation is the world's foremost manufacturer of power tools. Based in Japan, with factories around the globe including the UK, the company has over 100 years' experience and its products are highly regarded for both their performance and quality.

The Problem

With the price of raw materials for packaging rising, Makita was looking to increase the cost effectiveness of both its packaging and its packaging processes. At the same time, the company wanted to improve the sustainability of its packaging. Makita therefore invited Weedon PSC to undertake a total cost of ownership audit, analysing its production processes, productivity, logistics and transportation to help create a leaner, more cost-controlled supply chain.

At Makita's request, we looked first at the packaging for a sander, which included a lot of empty space in the box and a separate corrugated cardboard fitting inside to support the product. This two-piece packaging was expensive to produce and slow to assemble, which also resulted in high labour costs.

The Solution

We design packaging to minimise its impact on the environment at every stage of the supply chain. We proposed three possible solutions for Makita, of which one was a clear winner. The chosen box is a crashlock carton, manufactured from one-piece of corrugated cardboard. The fitting is cut from the same sheet as the outer box, using material that would otherwise have gone to waste.

The Benefits

The new packaging is a clear improvement both in terms of cost and sustainability:

- It fits closer to the product and uses less corrugated cardboard than the existing box.
- Delivered flat, it takes up less space on pallets, in storage and on transport, with significant savings throughout the supply chain.



- It is easier to assemble, so packing speeds have risen, with an annual saving of 233 hours of labour cost and improved efficiencies.

By doing away with a separate internal fitting, Makita is reducing its impact on the environment too. The new one-piece design has resulted in considerable ecological savings:

- 2812kg CO₂ saving from transport emissions – it would take 130 trees a whole year to absorb this amount of CO₂.
- 21 pallets saved per year = 5.25 trees saved.
- 550 metres of pallet stretch wrap saved each year – it takes 1.2 years for a single tree to absorb the CO₂ emissions from this amount of stretch wrap.
- 204 metres of plastic pallet banding saved each year.

This is for just one product in Makita's vast range. The company is now looking to use this packaging as a template to improve its other product packaging.