

# investing in process and efficiency

Located on the main highway in Ashburton, the Ashford Handicrafts shop and showroom are a renowned destination for spinners, weavers and all things crafty. A little less known is the fact that Ashford's production facility next door is the largest producer of spinning wheels and looms in the world, manufacturing over 2000 different components in their product range, and exporting all over the globe.

In 1934 Walter Ashford started out making wooden fireside stools during the depression, expanding into toys, nursery and household furniture. Today Ashford's remains a family company run by Walter's son Richard and his wife Elizabeth, and their son James recently returned from New York to join the team as Assistant General Manager. "We're a family business, and our factory has a family environment" explains James. Ashfords has long been part of the wider Ashburton family too – having been one of the town's larger employers for many years.

Ashfords also represent a near bygone era from NZ industry - a large, specialist solid-timber manufacturer with an innovative, top-quality and successful product range. Ashfords work almost exclusively in FSC certified Southland Beech. But while their factory retains the traditional woodworking machinery you'd expect to create such specialised products, many of these machines are sitting around unused. Because Ashford's workshop floor is nothing like a bygone era: it's a modern, organised and efficient facility making use of the latest technology and production methodologies – the latest of which is a Dimter S50 optimising saw from Weinig.

Ashfords are working under the 'lean' manufacturing system of continuous improvement, both to improve efficiency and to ensure safe working practices. The bulk of their production is done using CNC machines so efficiency and safety is already at a high level. Production Manager Ken Meehan – a key member of the Ashford factory for almost 40 years - explains how the lean model instigated the purchase of a new saw. "Industry accident statistics identified that operations using saws are the highest risk" says Ken. "As we start our production with green-sawn lumber, there's a lot of cutting required to get components to the right dimensions for the CNC, sanding or lacquering. Traditionally this involved a variety of processes on several types of saw. We worked out by changing the way we did



James Ashford (left) and Ken Meehan in front of the Dimter S 50 from Weinig.

things then the Dimter optimising saw could either reduce or remove the need for many of our usual saw processes."

The Dimter S50, made by solid-timber machinery specialists Weinig in Germany, is a push-feed saw with an operating accuracy of +/-0.5mm. Capable of taking timber up to 6.3 metres long and producing any length between 80 to 2400mm at width from 20 to 250mm, the Dimter is a very versatile and safe saw. The pusher on the infeed is also a scanner, and as it travels back along the infeed table (at up to 60 metres a minute), scans for chalk marks made by the operator that identify a defect. The saw then optimises cutting depending on pre-determined parameters. For example, it may be looking for a long defect-free piece – a 'clear.' Or it may maximise the number of fixed length sections available according to the required cut list – Ashfords cut and store 800mm lengths and re-introduce them to the Dimter when smaller parts are needed.

These optimisation parameters can be changed depending on the requirements of other areas of the factory. Ashford's can choose whether urgent orders are processed immediately, likely resulting in more wastage, or be incorporated into the existing cutting plans. "Having our yield figures available, live, is very useful" says Ken. "Without data it's very hard to assess. We're always looking for efficiencies, and so are constantly

working to lower our waste figure. Before the Dimter our raw wood waste figure was approximately 20%, so we'd cost accordingly. Now I can see on the Dimter's screen that we're at an overall wastage of just over 12% in total. We can break that down by month, or by pack of timber, or whatever measure we want to consider."

By re-arranging production methods Ken expected the Dimter to replace three cutting processes that used an upcut saw docking to length, and a radial arm saw. A year on from installation Ken's managed to utilise the Dimter significantly more than expected. "We're doing 50% more on the Dimter than we planned to" says Ken. "So we've reduced the use of all the other saws in the factory. We have a bench saw, a radial arm and a docking saw that are now pretty much redundant. Our other docking saw is probably getting about 5% of its previous use, and we're barely touching the twin-saw."

As well as reducing or removing the need for staff to use older, less safe saws – and saving a lot of associated work documented safety procedures and training for each of them the Dimter has raised the bar when it comes to safety. The operator loads the timber onto the large infeed table which sits on a slight incline to keep the timber against the fence. After scanning for chalk markings and raw length, the timber is pushed in, held pneumatically, then cut, all automatically. Light barriers

watch for obstructions – such as the operator's arm – and halt the pushing or cutting procedure when necessary. All the cutting taking place underneath a large, clear poly carbonate hood, meaning access to the blade during cutting is totally restricted. Perhaps the biggest risk to the operator now is splinters!

Ken also points out a couple of other features he appreciates on the Dimter. "It's remarkably fast and easy to change the blade" he says. "This saves us a lot of time, because we change blades a lot. We have a blade for rough-sawn material, and a finishing blade for the semi-finished components we re-introduce to the machine." But perhaps the most surprising feature that appeals to Ken is how it looks! "It's white. It's clean, and light. Smart-looking" he says, smiling. "It looks good."

The Dimter's smooth styling is certainly a contrast to the bare functionality and dark colours of the few older machines left in the Ashford factory. But Ken's comment also reflects a key foundation of Ashford Handicraft's success: the Dimter looks modern. In the same way that Ashford's products have evolved to keep fresh and contemporary, so too the Dimter visually demonstrates a similar drive for progress and modernity in the factory. Constant striving for new products and efficient methods has ensured Ashford Handicrafts have not only survived the collapse of timber furniture and craft manufacturing in New Zealand, but flourished. With their forward-thinking investment in process and efficiency, their commitment to sustainability and the joy their products give to so many people around the world, Ashfords is a success story to make any Kiwi proud.



The Weinig range of machinery is sold in NZ by W&R Jacks