

Strategy in Action

Multi-million pound investment in new machinery



In 2019/20, Thorlux made a multi-million pound investment in four new metal-forming machines which have increased capacity and modernised the manufacturing process.

Dave Dainter, Production Manager at Thorlux, explains why this investment was needed and what the benefits are to the business.

What was wrong with the old machines?

"The Amada machines that we replaced were over 25 years old, based on out-dated, inefficient technology. They kept breaking down, and we faced issues with getting parts for them. The old machines were sometimes down for weeks at a time when we needed to source a new part or, if a new part was not available, have the faulty part refurbished or repaired.

"It reached the point where Amada struggled to find engineers capable of repairing the old machines. Many of their younger engineers had not even seen our machines before, so knew very little about them. On one occasion we had to wait for several days to get a particular job done, because the only Amada engineer who knew what to do was not available.

"A major drawback was the lack of capacity on the old machines, which were based on single pallet-loading systems. Our policy is to keep

the machines running overnight, unattended, by loading large jobs late in the day. However, the lack of capacity meant the old machines would complete the workload at say 2 in the morning and sit there idle for six hours waiting for the day shift to start, not producing work."

What are the advantages of the new machines over the old machines?

"The new machines have many advantages, including:

- "The new machines have multiple-material pallet-loading systems as opposed to single pallet-loading/pallet unloading systems, which gives increased material-handling capacity.
- "The punches have servo-electric punch systems as opposed to the hydraulic systems of the old machines.
- "The new machines are significantly faster than the old ones.
- "Two of the new machines are combination machines, so they have a laser as well as a punch.
- "The new machines are much more reliable and are easier to maintain, with good support from Amada."

What has the reaction of the machine operators been?

"The reaction has been good. The operators have found the new machines to be a major improvement on the old systems, with updated software packages making them easier to program."

Have the machine operators needed additional training?

"As the machines have new technology, additional training has had to be given to the operators. Also, new Amada software is being used and trialled on the latest fibre laser machine, so our operators have had to be trained to use that."

What impact will the new machines have?

"The multiple-material pallet-loading systems mean we can produce smaller batch sizes, working closer to the order book, hence fulfilling more orders in a shorter period of time. The faster speed also means that more parts can be produced in the same period of time.

"Instead of machines finishing in the middle of the night, now, with the multiple-material pallet-loading systems, they have the capacity to run until the day shift comes in. With careful planning, it is possible to load enough work on a Friday morning to keep a machine running until Monday morning. This gives us maximum return on the investment, speeds up production and reduces delivery times.

"The two combination machines enable us to design better products with features that improve the function of the luminaires without adding additional components. It also reduces the number of operations that need to be performed. For example, we used to produce a DOT luminaire body by first punching the blank as a square on the old machines, followed by a manual operation of cutting the blank into a circle ready for spinning. Now we punch and laser the circular blank in one operation on the same machine, so it can be spun straight away.

"Thorlux can produce more work in-house that would normally have been outsourced and produced by subcontractors, hence reducing the cost to Thorlux and reducing the lead times.

"Finally, another major advantage is that the new machines cost less to run, because they are far more energy efficient."

