

Case Study

30% cost savings for Doncaster Laser with a pre-owned laser from World Machinery

Doncaster Laser Logistics Ltd has been manufacturing laser cut components for a wide range of industries including marine, nuclear, automotive, railway and catering since 1997. Founded by Managing Director Earl Pinnock and Production Director Darren Stones, the company has expanded rapidly, recently moving to larger premises in Carcroft, near Doncaster.

As a subcontractor, the company specialises in short runs of components, between 0.5 and 20 mm thick, in mild steel, stainless steel, aluminium and Perspex. Laser cutting lends itself particularly well to low volume manufacture, allowing customers to source prototype and bespoke parts at a competitive cost.

The company has five laser machines on its Carcroft site and a further three at a sister company. Earl Pinnock explained his reasons for choosing a pre-owned LVD Axel 3015 from World Machinery (Shropshire) Ltd. "One of our existing lasers was reaching the end of its useful life and we needed a new machine to maintain production levels. At the same time we wanted to increase capacity and reduce costs."

The LVD Axel 3015 has an X-axis of 3150 mm, Y-axis of 1600 mm and Z-axis travel of 100 mm. Rapid moves can be at 170 m/min, and the cutting speed of the flying optics head up to 15 m/min. For precise cutting, positioning accuracy is 0.05 mm and repeatability within 0.02 mm. Importantly for Doncaster Laser the machine has automatic sheet loading and unloading.

"We have tried night shifts in the past, but the productivity levels we achieved made it difficult to justify," Earl Pinnock continued, "the LVD will run completely unmanned overnight, starting at 4pm and finishing at 8am the next day, enabling us to increase capacity at little extra cost." To ensure smooth running out of hours, Doncaster Laser tags all its parts into the sheet. Tagging holds each component steady in the sheet, stopping it tipping, which can jam or damage the machine. Furthermore, the



LVD 3015 at Doncaster Lasers

handling system can then move the completed sheets to an unloading area ready for the individual parts to be broken out the following morning.

World Machinery sourced the LVD Axel 3015 from Europe. The machine was then taken back to its workshops for cleaning, assembly and repair ready for demonstration to the customer. Once Earl Pinnock had chosen to buy the machine, World Machinery organised its packing and transport, and carried out the final installation and commissioning at Doncaster Laser's factory.

Earl Pinnock said, "There are only three other Axel 3015 machines in the UK, putting us in a very privileged position. The machine technology is well proven with a reputation for reliability, which is very important for 24/7 operation. Our decision to purchase a pre-owned machine was easy as this machine was a quarter of the cost of a new one. We also found World Machinery to be very helpful, delivering it in good condition and providing skilful technical support." Doncaster Laser understands laser technology and plans to carry out its own machine maintenance, so it is in a good position to judge the skills of others.

Savings on production costs are expected to be in the region of 30%, enabling Doncaster Laser to offer keener prices across all its products. The company already wins around 35% of the business it quotes for, and aims to increase this to over 40% thanks to the competitive edge provided by the LVD. Automation and overnight working will also produce an increase in capacity of around 10%. Earl Pinnock concluded, "It will be easy to sell the extra volume of components that the new machine will produce. The much lower capital investment, extra capacity and lower production costs will combine to give us payback within 12 months."

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