

De Marchi

De Marchi enjoys up to four times more cut speed with AMADA ENSIS high-power fibre laser

Chippenham-based De Marchi Engineering, a specialist in stainless steel fixings for the construction industry, has invested in an automated AMADA ENSIS-3015AJ 9 kW fibre laser cutting machine to help it profile parts up to 25mm thick. The arrival of the new machine has seen De Marchi witness a three-to-four fold increase in cut speed for the components it processes. Since installation in April 2019, the ENSIS has been complemented by the acquisition of two new high tonnage AMADA HFE3i series press brakes.

De Marchi Engineering was established by Richard Collins in 1993 and remains a family-run business to this day, with sons Paul and Mark currently at the helm. The company can supply bespoke fabrications or high-volume batch work, all with the quality assurance of ISO9001. Notably, De Marchi is a manufacturer of CE approved structural steelwork to EN1090-1:2009+A1:2011 EXC2. The company serves construction companies, building restoration specialists, concrete pre-casters, stonemasons, civil engineers, playground equipment manufacturers and fall-arrest system specialists, to list but a few.

At De Marchi, continuous investment in the latest technology provides higher levels of quality, faster turnaround and a continually expanding range of fabrication capabilities. With stainless steel brackets commanding around 80% of output, core to the company's offer is its profiling technology.

"Originally we used plasma cutting and waterjet, but three years ago we added our first laser cutter with the AMADA LC-F1 and loading tower," confirms Paul Collins.

Despite functioning perfectly and fully meeting expectations, the recent arrival of a new business deal meant that even more laser-cutting capacity was required.

"We managed to secure an exclusive supplier deal with our biggest customer, which meant the 4 kW LC-F1 would not be able to keep pace with the extra throughput required as we were already close to capacity," says Mr Collins. "Originally we thought about simply adding a second LC-F1, but in all honesty we didn't have the space. Furthermore, oscillator output had moved on and we knew that the 9 kW AMADA ENSIS could offer us a lot more."

De Marchi spoke with AMADA about the availability of an ENSIS and was pleased to learn about a machine that had just arrived at a port in Belgium. Coupled with the availability of an AS LUL twin-loading tower at AMADA's UK headquarters in Kidderminster, the company decided to part-exchange its LC-F1 machine.

The AMADA ENSIS-AJ 9 kW fibre laser cutting machine with AS LUL-3015 twin tower automation system (the first such system in the UK) has a maximum working area of 3m by 1.5m. As well as processing stainless steel up to 25mm thick, the machine can also handle mild steel up to 25mm and aluminium up to 25mm.

"Since it was installed in April 2019, the 9 kW ENSIS has been providing us with up to four times more cut speed and capacity, which means we're able to meet the requirements of our new customer supply arrangement, with room to spare," says Mr Collins. "We use the machine to produce stainless steel brackets in thickness ranging from 2mm to 25mm. Moreover, we can store up to 30 tons of material in the loading tower for 24/7 cutting, which is hugely beneficial."





De Marchi is also using the telemetry available with AMADA V-factory software to capture live data and let the company utilise performance statistics and analysis reports.

“The reporting is fantastic, and has brought home just how quick the ENSIS is,” says Mr Collins. “For instance, we’ve discovered that some days we’re getting through 24 tonnes of material cutting, which is quite something.”

De Marchi processes batches from 1-off up to a few hundred, and makes many components to order. Notably, the arrival of the ENSIS has had a significant impact on quality, particularly on thicker stainless steel parts. Central to the advanced capability of ENSIS-AJ high-power fibre lasers is AMADA’s Variable Beam Control technology, whereby the laser beam mode is automatically adapted to deliver stable cutting across all material types and thicknesses.

“We could see that the quality was better with our profiled components, so we decided to try and enhance our subsequent bending capability, opting to install two AMADA press brakes,” says Mr Collins.

The two machines – a HFE3i-1703 8 axis model (170 ton, 3m capacity) and a HFE3i-4004 long-stroke press brake (400 ton, 4m capacity) – arrived in August 2019. The company has also installed AMADA’s VPSS 3i Bend/Blanking software system to help simplify and speed up programming. Thanks to the software, files can be shared between the press brakes and the laser cutter, aiding continuity.

“Traditionally, most of our brackets have been fairly simple, featuring one or two bends,” says Mr Collins. “However, in recent years there’s been a distinct trend for more complex bracketry, and many of our current orders simply could not be processed efficiently on the press brakes we had previously. In short, the new AMADA machines – press brakes and laser cutter – have cut our lead times, which is essential in the highly competitive market of today. Short lead times are a major differentiator for De Marchi, along with consistent, right-first-time quality. These are our customer commitments.”

Three years ago, De Marchi took on a second premises on the same trading estate and has not looked back. In the time since, the company has grown sales around 30% year-on-year, effectively doubling its size. Today, De Marchi has 30 employees and expects this number to rise further as it continues to capture market share.

“The market is tough, but with the right approach to customer satisfaction, and the right investment in the latest manufacturing technologies, it’s possible to thrive,” concludes Mr Collins. “Our decision to invest in AMADA machines is certainly paying dividends and we’re really pleased with the progress we’ve made. Furthermore, AMADA’s support has been great from the outset; they are always there if we need them, either in person, or over the phone.”