A Salvagnini L1Xe fibre laser profiling centre has helped Ashford-based Kent Metal Developments (KMD) replace two eight-year-old CO₂ lasers, a move that has led to a considerable cut in energy consumption without any loss of capacity thanks to the new machine’s impressive speed of cut, automation and output capability.

Established in 1990, KMD has established itself as a key supplier to the specialist automotive market. Disability vehicles and road sweepers are among the projects that form core business at this progressive manufacturer.

In a strategy designed to enable further growth, the 30-employee company recently sought to replace its two “tired” CO₂ laser cutters. But there was one snag, as KMD’s sales director, Phil Chapman explains.

“Unfortunately, at our premises we don’t have much available power,” he says. “For this reason we couldn’t upgrade to more powerful CO₂ lasers as they tend to draw a lot of electricity. However, every time we saw a new laser we realised we were missing out and something had to be done.”

A potential way forward emerged when KMD became aware of Salvagnini’s innovative L1Xe fibre laser profiling centre. Energy consumption and running costs are traditionally high on CO₂ lasers, however, the fibre laser source on the L1Xe cuts hourly running costs significantly as a result of factors that include: up to 70% reduction in energy consumption thanks to high source efficiency; cost per part reduced by more than 50%; lower impact on consumables due to the absence of optical path, mirrors and bellows; reduced maintenance costs; the elimination of laser gas; and the eradication of standby currents and source warm-up times.

As well as being an ecologically responsible solution, the L1Xe is exceptionally fast, as Phil Chapman is able to testify.

“After our initial enquiry Salvagnini sent me a DVD of the machine in action,” he says. “To be honest I was so shocked by its speed that I thought the DVD was on fast-forward. We subsequently went to Italy with Salvagnini to conduct cutting trials and meet some end users. I was sceptical that the machine could match up to the DVD, but we came back thinking we simply had to have it.”

Installed in November 2010, the Salvagnini L1Xe has been set to work processing mild steel up to 15mm thick and stainless steel up to 8mm. Small, repeat batch sizes of 10-40 are the order of the day at KMD, so quick changeover times are essential, but here the L1Xe excels with its simple configuration. What’s more, there are no routine service requirements for the laser source and power consumption is up to 75% less than comparable CO₂ models.

“Using less power has enabled our business to replace two CO₂ machines with a single fibre laser, but without any compromise to capacity,” Phil Chapman points out. “The use of the shuttle table in tandem with high cutting speeds has meant we are to meet all our regular commitments. For example, one previous job made from 4mm thick stainless steel used to take 4 hours, but on the new L1Xe the same job takes just 1.5 hours.”

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