

Soaking up the benefits of customised laser cutting

SORB Engineers is a company that specialises in making the most of its resources. So when it decided to replace two existing laser machines with a state-of-the-art automated laser cutting cell from Prima Finn-Power UK, it should be no surprise that the company wants to squeeze the maximum return from its investment. The result is a customised installation delivering faster and more accurate profiling, as well as lights out capability and forty percent extra material capacity than standard.

Production manager Andy Proniw explains: "Our existing machines were coming to the end of their useful lives and we could see that, particularly in a compact operation such as ours, the ability to harness the full potential of modern workhandling systems would provide us with a number of benefits."

After undertaking a thorough market investigation, MD Mike Simpson selected a solution from Prima Finn-Power UK. At its heart is a 4kW Platino laser machine capable of quickly and accurately profiling up to 25mm mild steel, 15mm stainless steel and 10mm thick aluminium sheet. It also provides 0.03mm cutting accuracy across its entire machining envelope of 3 metres by 1.5 metres, while its flying optics design and high dynamics enable head speeds of up to 140 m/min and accelerations of 12 m/s² to be achieved.

"The Platino's ability to pierce material in around 0.5 seconds and cut at up to 6.5 m/min has substantially reduced cycle times and increased productivity, enabling



us to reduce the effect of escalating raw material costs," notes business development manager David Smart. "Similarly, its inherent accuracy and repeatability has allowed us to tackle a much wider range of products than we could with the previous equipment."

The second key element in SORB's new laser installation is a purpose-designed 14-storey Prima TowerServer work handling system. The unit incorporates four additional pallet stations over the standard 10-storey model and has been custom-engineered to

fit snugly under the 5.3 metre high roof line at SORB's premises. "There is a bolt at the top of the tower that is just 20mm from the roof and, thanks to the skill of the Prima engineers, we did not have to do any building modifications at all," observes Mike Simpson.

According to Simpson, the TowerServer delivers a range of productivity benefits. "First and foremost, it gives us extra flexibility. Unlike our previous machines, which needed operator input at the start and finish of each cycle to unload processed parts and position a new sheet of raw material, the TowerServer enables the Platino to run unattended. Each of the 14 shelves has a capacity of 3 tonnes and incorporates an automatic loading and unloading system. By contrast, it might have taken three or four of us up to ten minutes each time a large sheet of say 15mm material was needed to be loaded on the previous machines. With the tower unit, it is not only both faster and a lot safer, but also allows us to employ our workforce more effectively on skilled manufacturing tasks."

"Likewise, it enables us to handle the more complex, precision, prototyping and short lead time work during the day shift, while customers' volume requirements can be processed throughout the night under lights out conditions," adds Smart.

Hand in hand with SORB's new ability to run 24/7 are the increased material stockholding and accurate recording capabilities of the TowerServer unit, which effectively transform it into an automated store. Proniw explains that by having deliveries of raw material loaded directly on to its pallets, the disruption and potential health and safety hazards associated with moving large sheets around a busy production shop have now been eliminated.

While the installation will keep running unattended until it runs out of material or has completed all of its jobs, an additional refinement built into its offline programming capabilities enables Mike Simpson to remotely interrogate and control the new equipment from home.



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