

## Case Study

### A cutting edge for Stevens & Carlotti

Life in the subcontract metalworking sector has never been easy. But as Kent-based Stevens & Carlotti has shown, investment in high capability CNC production technology can prove decisive in competing against low wage economies in Eastern Europe and Asia.

Established 40 years ago, Stevens & Carlotti has grown to become one of Kent's largest sheet metal fabricating companies. It has occupied its present site in Sandwich for more than 10 years and, with 75 employees, provides a comprehensive array of cutting, punching, folding, machining, assembly and paint shop facilities. Its products range from simple brackets and assemblies – in up to 25 mm thick mild steel and 8 mm thick stainless steel – to complete control panels, fuel tanks and canopies for customers in industries as diverse as power generation, pump manufacture and aircraft ground support equipment.

“Our wide range of services has enabled us to establish a ‘complete job’ mentality, both with our customers and workforce,” says director Marco Carlotti. “We undertake virtually everything in-house to maintain greater control over quality and delivery lead times on our orders.”

“We were early adopters of NC technology,” Carlotti explains. “We installed our first computer controlled turret punches more than 25 years ago. Today, these are augmented by automated presses and folding machines.”

#### Subcontracted

Until 10 years ago, all of Stevens & Carlotti's laser cutting requirements were subcontracted out. But in 1998, with the demand for profiling work growing, the company purchased a manually-fed 2 kW laser machine. A year later a second machine was added.

Equipped with a shuttle table loading and unloading system, the second machine represented the company's first steps in work handling automation. But as its profiling requirements continued to expand, Stevens & Carlotti looked again at ways of increasing productivity and throughput.

“As part of my search, I visited Prima's stand at MACH 2004 to check out the capabilities of its Platino machine,” says Carlotti. “I was immediately impressed by its speed and accuracy, as well as its ability to be equipped with a series of work handling solutions.

“I anticipated purchasing another shuttle fed machine. But after evaluating the Platino's price/performance, low maintenance requirements and compact footprint against competitive equipment, we selected a 4 kW Prima machine, complete with 10-storey TowerServer automated work handling system capable of ‘lights out’ operation.”

The ability to extend unmanned running beyond the normal working day offered significant cost benefits. Yet it took a while – and the installation of a webcam monitoring system so that Mr Carlotti could check the status of the machine from home – to build confidence that the Prima installation really would run for hour after hour without attention!

“It transformed our laser cutting capabilities – literally overnight. We can load the TowerServer with up to 30 tonnes of raw material, program the machine to produce a variety of jobs in different material specs and gauges, press the start button and walk away,” says Carlotti. “The machine will simply continue to run until it has completed all of its jobs, or it runs out of material.

“I estimate that the shorter cycle times of the Prima machine, combined with its automated work handling system, have resulted in a 10-fold increase in productivity over the previous manually fed lasers we had on site.”

#### Replaced

Within a year Stevens & Carlotti installed one of Prima's latest CompactServer units. A key benefit of this work handling solution is that it has been designed to both fit above and integrate with the laser machine's pallet changer without requiring any additional floor space. It is suitable for sheets up to 1500 mm x 3000 mm and features two shelves, each with a 3000 kg payload and a maximum raw or finished material stack height of 150 mm.



Like Stevens & Carlotti's previous Platino/TowerServer combination, the CompactServer equipped machine also runs under ‘lights out’ conditions if required.

“Although it doesn't have the capacity and sophistication of the Tower unit, the CompactServer does have the merit of being extremely robust and simple to use,” Carlotti adds. “Crucially, it also has the benefit of fitting under our overhead crane, which eventually became an important factor in its selection.”

Carlotti is quick to acknowledge the contribution made by the Prima laser equipment to his company's ongoing success. Its work handling systems mirror other investments made throughout the company – in automated paint plant, robotic welding and latest generation press brakes, for example – which are all regarded as essential for maintaining competitiveness, particularly against suppliers from Eastern Europe or further afield in Asia.

In addition to automating the company's manufacturing facilities, Stevens & Carlotti's is looking to update and streamline a number of its commercial systems. “New production control software is already in hand,” says Carlotti. “We're also working smarter in other areas too – such as the use of common blanked parts on a number of jobs.

“Many of our contracts are for repeat work and although batch quantities are not very large – typically between 30 and 100 units – the ability to respond quickly and flexibly to customers' needs can often make the difference between winning or losing the business.

“Technology like Prima's high speed laser cutting and work handling systems will remain at the heart of our capabilities as we aim to expand our operations further during the next two years.”

Contact: Joe Attuoni  
E: joe@primauk.com