

A close-up photograph showing a person's hands working on a metal part. The part is a flat sheet with several small holes and a larger rectangular cutout. The person is using a tool to work on the edge of the metal. The background is a blurred industrial setting.

## Timesavers handles production growth at A A Sheetmetal

**The combination of improved laser processing and increased customer demand led to a bottleneck at A A Sheetmetal when it came to deburring and surface graining. Traditionally these were manual operations at the Norwich-based sub-contract sheetmetal company, but increasing volumes demanded an automated solution, in the form of a Timesavers Series 32, abrasive belt and rotary carousel brush deburring and surface finishing machine with an 1100mm working width from Ellesco.**

A A Sheetmetal was formed in 1987 by co-directors Alan Lappin and Alan Smith to serve the food packaging industry and commercial catering equipment sectors, this involved laser cutting flat sheet, forming, and welding stainless steel fabrications in relatively small batch quantities. Year-on-year growth saw the business develop, with three relocations to manage the expanding customer base over the years. With this growth came a requirement to invest, which saw the arrival of a flat-bed fibre laser to replace the older CO2 machine. "Everything we produce goes through the laser machine and the move to fibre gave productivity a massive boost. The result was more parts which all required edge finishing to some extent, and as this was done manually it put greater pressure on the team," says Alan Lappin. "This got us thinking about reducing the manual content of our deburring to improve workflow and reduce the health & safety aspect of vibration white finger due to use of manual air tools.

Then, when a long-standing customer doubled the volume of work it decision to move to the Timesaver machine was made for us, as we simply couldn't have managed that volume with manual deburring and finishing."

A particular requirement of the food industry that A A Sheetmetal services is the need to ensure everything is spotlessly clean, which requires processing equipment to be cleaned down intensively and frequently. The nature of this equipment means a lot of manual intervention reaching into dark corners through slots and along edges. Therefore, the rounded edges created by the Timesavers rotary brushes are ideal, eliminating any risk to the operator from sharp corners. Additionally, the brushes will produce a non-directional finish if required; ideal for cleaning down with a pressure washer.

The Timesavers 32 series machine at A A Sheetmetal is capable of automatically deburring, finishing, edge rounding and removal of laser oxide skin through its combination of wide abrasive belt and four rotary brushes. Thanks to the vacuum table, which features an integrated cleaning cycle, parts as small as 50 mm<sup>2</sup> can be processed without any manual input. Machine control is provided by the Siemens HMI located conveniently at 45 degrees on the front corner of the machine. From this the operator can quickly set all of the machine parameters from grind height (between 0 and 100 m) and table speed (0.2 to 8 m/min).

From the control position the operator is also able to view the illuminated work area through the large window. The 32 series machines are ideal for burr removal on laser-cut (including plastic coated, without disturbing the plastic), water jet, punched and guillotined edges. The machine can also process a wide range of materials including stainless and other steels straight onto a 'sticky' conveyor belt, and with the Timesavers' vacuum table, aluminium, copper and other metals that would otherwise require repeated, manual cleaning of the conveyor belt can also be processed.



For the type of work being produced by A A Sheetmetal final visual appearance is important so the ability to produce consistent brushed finishes and corner radii is a major benefit. Additionally, the speed of the processing of parts through the Timesavers machine means that both sides of a part can be treated equally, so any visual inspection of a completed cabinet will show the finish as good on the inside as on the outside. "We can now process batches irrespective of size and know that every part will look identical. Furthermore, it makes no difference how complex the part shape is as we know that every edge will be deburred/rounded to the same degree, and the fact that we can deburr plastic coated material without damaging the metal surface is a major advantage," says Simon Miller, Foreman, A A Sheetmetal. The secret behind this edge consistency is the Timesavers' Rotary Carousel Brush system that hits every edge from every-which-way.





In processing material with this rotary motion a consistent and equal edge break is achieved, as opposed to the older technology of twin brushes which only work with the flow of material or across it at 90 degrees. In addition to the consistency and quality generated by the Timesavers 32-1100-WRB from Ellesco, the improved productivity was also vital as business continues to grow. "The Timesavers machine is the equivalent of having 10 people manually deburring," says Alan Lappin. "With its arrival these people are now free to use their skills more productively fabricating and welding finished assemblies. Deburring by hand is extremely time consuming and poses health issues from a vibration point of view and the environment. With the Timesavers having dust extraction the workplace is now dust free and operators no longer have any concerns over the potential damage that using hand tools can bring."

The Timesavers machine was recommended to A A Sheetmetal by one of its customers who used a similar machine from Ellesco, and along with that recommendation it was the versatility of the 32-1100-WRB that convinced the two Alans that this was the right option for them. The ability to deburr and grain on the same machine in the same cycle gave them options when processing material. In addition, the ease of use of the Timesavers allows work to be set-up very quickly irrespective of batch size. What Alan Lappin describes as 'intense' training was provided to Simon and two others while the machine was being commissioned, and then just 15 minutes was spent by Simon passing on sufficient knowledge to set and operate the machine in 15 minutes to anyone else that needed to operate the machine. "That was all that was needed, it really was that straightforward, and we know that the support is there at the end of the phone at Ellesco if we ever have any questions. Having the machine has given us the confidence to look for larger volume work in the knowledge that we no longer have that bottleneck when it comes to deburring and graining," says Alan Lappin.

