

Software produces right-first-time parts

During 2018, Holmfirth-based sheet metal design and engineering specialists Allsops Ltd upgraded its bending capability with the addition of two Xpert 40 Bystronic press brakes having a bending length of one metre and a stroke of 200 mm. Raising the number of press brakes on site from this supplier and predecessor companies to 11, they provide a much more efficient platform for bending smaller parts than is possible using a 3 m capacity machine, which necessarily has slower axis movements.

File to part is quick and accurate

Further benefits come from Allsop's use of the Swiss manufacturer's BySoft 7 software to program both the fibre laser cutting machines and the new press brakes. It results in seamless, rapid progression from cutting the blank to bending and guarantees accuracy of the first-off part. This is invaluable for economy of production when dealing with prototypes and short runs. The software includes simulation of the bending sequence to identify any impending collisions.

Allsop's technical director Stephane Lericolais says: "We previously used generic programming software for laser cutting and bending, but since 2010 we have standardised on BySoft 7. It imports our customers' 3-D CAD models, flattens them and automatically generates programs offline for cutting the parts, nesting them

optimally within a 3 x 1.5 m sheet, and then bending them accurately.

"We know that the first part will be within tolerance whereas previously, before producing a prototype or starting a batch run, we would have to cut a blank, calculate the bend allowance, fold the part, check it for accuracy and have to do the same again perhaps once or twice before the job was right. All of this created expensive scrap and took much longer."

Not only is production able to start more quickly on the compact Xpert 40 press brakes, but the machines are also highly efficient, according to Allsop's production director Lyndon Tyas: "With these inherently fast bending cells, all of the upper and lower tooling is to hand in drawers on the left and right hand sides of the machine and the operator can remain seated when loading them.

"Tool positions are automatically calculated as a part of the program and flashing LEDs on the front of the upper beam instruct the operator where to mount the tool segments.

"The ergonomic configuration means that setting up the machine is rapid, typically 15 minutes for a straightforward part. Accuracy is high - we easily hold ± 0.5 mm, more than good enough for most jobs and we can even halve that tolerance if required."

He also pointed out that there is space to



Examples of cabinets produced by Allsops using panels cut and bent on Bystronic fibre laser and press braking equipment

hold cut blanks on one side of the machine and components that have been bent on the other. Another feature is the ByVision touch-screen control, which can be conveniently positioned to one side at the operator's eye level, or just above it centrally if preferred. 24/7 production no longer needed.

Allsops has been a customer of Bystronic or its acquired companies for more than 20 years and there is little sheet metal processing equipment on the Holmfirth site, apart from a bending line and a punch press, that have not been sourced from this supplier. While thinner gauges of mild steel constitute a majority of the material going through the machines, plate up to 25 mm thick is also cut as well as stainless steel and aluminium up to 30 mm.

Founded in 1959 by Bob Allsop to support a growing manufacturing community in west Yorkshire, the sheet metal design and engineering subcontractor is celebrating its 60th anniversary this year. It operates from 84,000 sq ft premises in Honley, near Holmfirth.

From the start, the company adopted an unwavering focus on quality. Services range from design consultancy through punching, laser cutting, folding, welding, fabrication and powder coating to assembly. Installation of modern and highly efficient production machinery, notably from Bystronic, has a boosted turnover to in excess of £10 million and the company now employs 150 staff.

Bystronic UK Ltd
Tel: 0844 848 5850
Email: daniel.thombs@bystronic.com
www.bystronic.com



The pair of Bystronic Xpert 40 press brake cells in operation at Allsops. Almost all cut sheet metal at the Holmfirth factory is folded