

Case Study

Barlow Sheet Metal, UK

PRESS BRAKE FLEXIBILITY PAYS DIVIDENDS

Two LVD Dyna-Press electric press brakes complement two larger LVD PPEB hydraulic press brakes to give Barlow Sheet Metal the flexibility it needs on fine limit sheet metal forming.

The 24-tonne pressing force Dyna-Press machines can take a standard 800mm length of tooling, have very fast rapid travel speeds and occupy a very small footprint. Together with the 80-tonne, 2.5m capacity PPEB press brakes and two LVD Strippit P Series punch presses and associated tooling they represent an investment of over £750,000 made by Barlow over the past four years.

Portsmouth-based Barlow Sheet Metal specialises in precision fine limit sheet metal for customers in the electronics industry – predominantly UK companies but with products that are exported all around the world. These include items such as broadcast equipment, lighting units and power supplies.

Overall, Barlow supplies over half a million parts a year with a reject rate on batches of just 0.0006% and on-time delivery fulfilment of 98%.

“Everything comes through the punch presses and press brakes, so you can see how critical those machines are to us,” says Managing Director Steve Barlow.

As well as offering a sheet metal fabrication service, Barlow also helps customers to develop their own bespoke packaging and enclosures.

“Often customers won’t have a drawing of what they want us to manufacture for them,” says Steve Barlow. “They will come to us with a sketch and we will draw it up in Solidworks. We find out what they need and then design to those needs. The CAD operators and designers are all from the shop floor and have sheet metal experience. So we know that what we design we can make.”

He says that there are big advantages to the customer in having a bespoke product.

“For example, we can use a forming tool on the punch press to produce card guides where before the customer would have screwed in extruded rails and use plastic guides. This cuts out hand assembly and makes the alignment more precise. We can put ventilation where it is needed and can make the dimensions suit their specific requirement. And because it is designed in CAD and made on precision CNC machines, all the electronic components simply slide into place.”

The two new LVD Strippit P CNC punching machines drive production. These sit alongside an LVD Shape Delta punch press and replaced two older Shape machines dating from before Shape became part of LVD – so the relationship goes back a long way.

The new punch presses were installed four years ago and are around 20% to 30% faster than the old machines. They also use a lot less power,” says Steve Barlow.

“When we are busy those machines are going flat out every day and on a night shift too – so that is where the need for reliability comes in.”

“The continuity of tolerance is extremely important, which is why we rely on good machines that won’t let you down on the tolerance and accuracy.”

The two LVD PPEB press brakes followed in April and May 2019.





Steve Barlow says that he could have chosen from a wealth of possible suppliers, but it was LVD that offered the best solution.

He says the decisive factor was how easy the LVD machines are to program and use.

“I always involve the staff that are going to be using the machines and they saw how easy it was to program them. I asked them what they thought of the LVD machines and they said ‘brilliant’. After that it was just a case of choosing the right model for us.”

“All our programming for the punching always has been and always will be offline. I thought that, as the technology was there, I would give some of the folding work to the offline programmers too. But the programming on the machine is so easy that we don’t need to.”

“We do some really complicated folding, but there is not one job that we haven’t been able to program on the machine.”

“Beforehand we had an 80-tonne press and a 50-tonne press. So, there were some jobs that couldn’t go on either machine. Now we have two 80-tonne machines we don’t have that problem. We don’t generally punch anything over 2m wide, so I chose 2.5m machines just to give us that bit extra capacity.”

The two Dyna-Press electric press brakes were installed in 2020 and replaced a smaller hydraulic press brake and a folder. They have taken Barlow’s bending capabilities to another level.

“When it came to ordering the two smaller Dyna-Press machines, we wanted to be able to do as much as we could on them, knowing that the maximum tonnage was lower. The presses take a full length of standard tooling and the control is more or less exactly the same as the PPEB press brakes, which gave us continuity and they were a very good price,” says Steve Barlow.

Space was at a premium too, so the small footprint of the machines was a really important benefit.

In practice, Steve Barlow found that around 95% of the work that goes through the shop can be formed on any of the four LVD press brakes.

This gives a very high degree of flexibility. And because the control systems are almost identical, any operator can work on any machine.

Rather than train the four existing press brake operators to run the Dyna-Presses, Steve selected five people who only had a little bit of press brake experience for the job. The result is that he now has nine operators who can work on all four machines.

“The beauty of it is that the staff who were trained on the Dyna-Presses can come straight over and use the big machines too. The flexibility now is fantastic.”

That has really paid off during the COVID-19 pandemic.

“Because all the operators can work any of the press brakes – if I’m making a choice on furlough then I’m purely making a choice on what work I have got for this week,” says Steve.

“Having the flexibility of the press brakes makes it a lot easier to make those decisions.”

