

THE POSSIBILITIES ARE ENDLESS

Machinery World reports on new developments that should interest fabrication shops everywhere.

Punch presses and press brakes are to fabrication what milling and turning are to machining. These proven processes continue to underpin operations at fabrication shops up and down the country, which is precisely why machine suppliers continue to develop and launch new models offering an ever greater range of functionality and features.

Beginning with press brakes, Bystronic will use its forthcoming (24 March) Bending Solutions Seminar to show its new Exel 50-tonne press brake. Taking place at the company's Coventry headquarters, the event will also feature demonstrations of Bystronic's entire range of press brake and tooling options, although the Exel will be the star of the show.

The Bystronic Exel is fast in operation with a small footprint that helps utilise every millimetre of available capacity. The bed length of 1650mm is also the distance between frames so component lengths are not restricted by the depth of the machine's throat. The Exel comes complete with Euro upper tools, quick-to-change single-vee lower dies, laser front guards and a Cybelec CNC 60 control.

Subcontract fabricators are the biggest takers of press brake technology and this trend shows no sign of letting up. A case in point is Stoke-on-Trent-based KMF Precision Sheet Metal, which has recently installed two Amada HFP 50-20 press brakes at its newly opened (February) Advanced Products facility.

"The new Advanced Products facility is generating a lot of excitement both internally and externally. The delivery of new equipment, such as the two Amada press brakes, is an indication of the level of commitment that is in place," says Keith Nicholl, KMF's business improvement manager.

The two high specification Amada machines will form part of the sheet metal processing cells within the facility and feature seven CNC axes, an infrared angle correction system, off line programming with 3D visualisation software and one-stroke tooling capability for reduced set-up.

Among the suppliers to launch new press brakes in recent months is LVD, which now offers 35-50 ton configurations of its PPEC series of mid-range press brakes. According to LVD, the smaller tonnage PPEC machines are fast, compact, simple to operate and energy efficient. They achieve bending speeds of up to 20mm/sec, providing the fast, accurate bending of smaller parts.

The new PPEC models are also equipped with LVD's Cadman Lite control. Based on the same platform as the full-featured Cadman Touch control, Cadman Lite features 2D graphic programming with



automatic collision detection, direct angle or 'Quick Bend' programming and connection with the company's Cadman-B offline programming software.

LVD also recently introduced its Strippit VX-Series of CNC turret punch presses designed for fast processing of thin sheet materials. These machines combine a high speed 20kN hydraulic ram with a large 48-station turret and table design to provide high productivity output. Delivering a hit rate of up to 530 hits/min on 25mm centres, the machines can handle workpieces up to 3.5mm.

A double-track turret provides a flexible configuration of 48 stations featuring four standard 88.9mm auto-indexing stations that can utilise the latest wheel tool technology.

Both the Strippit VX-series punch presses and PPEC series press brakes now feature LVD's energy reduction system (ERS). ERS manages power consumption throughout the operating day during machine operation, standby and idle times, reducing energy consumption by 15-30% over previous generation machines.

Among the recent takers of LVD press brake technology is Leicester-based subcontract fabricator, Carlton Laser Services (CLS), which has installed three Easy-Form series CNC press brakes.

"We needed to de-skill the bending process for precise and difficult components ranging from batch quantities of 1-100, so we set out to find machinery that had the very best bending technology," says Mohan Jassi, managing director for Carlton Laser. "The final evaluation included bending trials in which assessments were made for ease of use, offline programming capability, pre-production set-up time, cycle time and part accuracy."

Another supplier with news regarding both punch presses and press brakes is Press and Shear Machinery, which has recently been appointed as UK agent for Danobat



punch presses of Spain and Germany's Weinbrenner press brakes.

Press and Shear says that Weinbrenner manufactures fully automated bending machines and robotically fed press brakes at its factory near Stuttgart. The preferred robot supplier for such systems is Kuga, whose products do not need to be programmed independently but are controlled via the Weinbrenner CNC system.

Danobat punch presses incorporate the latest E-technology, including a programmable servo-electric ram that eliminates the need for energy-intensive hydraulic actuation.

Punch press developments from a control perspective include Fanuc's 30i/31i-P model B high speed controls, which are capable of supporting new levels of punching and nibbling rates. They have increased hit rates as a result of high speed punch control cycles and an increased number of controllable axes: 32/20 controlled axes and 24/4 simultaneously controlled axes respectively.

Fanuc's 30i/31i-P model B CNCs offer large-part program management, a high speed ethernet interface and minimal training and programming. They provide up to 8Mb of high capacity, non-volatile internal memory that is available to store as many as 4,000 large nested part programs.

There is no doubt that new innovation helps sell machines, and with this in mind Rainer UK has enjoyed recent sales success with the acquisition of a new Eletek 15-30 servo electric turret punch press centre by Daro Products of Sudbury, Suffolk. This new machine, the third Rainer model at Daro, features high speed linear drive and twin Y-axis drives, Siemens 840D CNC control, and water-cooled electric ram for high energy efficiency.

In combination, punch presses and press brakes can do almost anything, so to stay ahead of the competition fabricators should make sure they understand the possibilities!