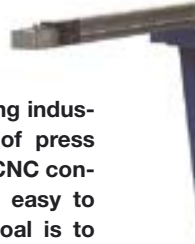




Elgin, located in Elgin, IL is part of the Formtek Group of companies. The Group has a well known name and a history of providing innovative and reliable equipment to the metal forming and metal processing industries. ELGIN offers a line of press brakes and shears that are CNC controlled and are simple and easy to maintain. The company's goal is to provide the best productivity solutions for small machine shops as well as large production environments where piece parts and efficiency makes all the difference.



The Elgin Shear and Press machine which was developed using B&R's innovative Power Panel PP35 is used for cutting sheet metal in its most simple form. A back gauge is positioned to give the correct dimensional cut and upon an operator pressing a foot switch hydraulic rams are operated to cut the metal. Further enhancements can involve automatic adjustable rake angle and adjustable cut depth, enabling thicker materials to be cut and faster cutting of materials with smaller widths.

Jack Donovan, Electrical Engineering Manager of Axon, Elgin's design company gives the following explanation as to why the company chose the B&R products for the development of this machine, "We were aware of B&R's capabilities and decided after the evaluation of various suppliers that they would be best able to meet the needs of our machine application. The solution provided by B&R is a simple operating program with an ability to expand for higher tech applications."

Powerful operator panel

The first B&R Elgin Shear development therefore incorporates the B&R PP35 HMI controller which reduces Elgin's spare parts list and space in the electrical control cabinet due to its compact design and integrated capabilities. The graphic interface and simple user keys enable back gauge positions, setup information and manual functions to be easily implemented. The




Press Brakes & Shear Genius

two critical areas of the machine control involve high speed positioning of the back gauge which is achieved using two speed motor control and encoder feedback closing the loop in the PP35. The second important area involves recipe and program handling. The PP35 with its large storage capacity enables Elgin to store multiple cut sequences outperforming their competitor's machines. The graphical display enables far more data to be displayed than standard line displays with the additional benefits of extremely large characters for distance viewing and images for faults and machine status. The integrated I/O is sufficient to drive all the relays and hydraulic operations while it is possible to expand the I/O via CAN Bus to give the system extra capability. This is true on the Press Brakes where the system is expanded using a CX408 I/O Block.

"Our machinery is being promoted as a technically advanced piece of equipment that offers the customer more options, more flexibility and tighter tolerances than our competition. This is being accomplished at a very competitive cost to the end user with B&R's help. Elgin is therefore very happy to have B&R controls on our equipment because it is an economical control with high performance programming that can easily be integrated into our products", says Mike McGuire, Sales Manager at Formtek Metalforming Integration (FMI).

"Our economical flexibility is the biggest advantage we can pass on to our customers. Whatever the customer wants and needs, Elgin can provide a solution."

"We have an open relationship where ideas are shared and plans are made to benefit both parties. We will be expanding our use of B&R controls to a second shear model and press brake model. I would like to again express our, and my personal, gratitude to B&R USA, regional sales office in Chicago for all their assistance and patience with Elgin as we continue developing a new product line for the market" describes McGuire their company's relationship with B&R. 

Left: A PP35 handles control and visualization on the Elgin shear machine.
Middle and right: Back gauge of the press brake and shear machines.

