AUTOMATIC FEEDER

The Automatic Feeder was custom-designed to feed single sheets of metal, varying in width from 18” to 60” and in length from 36” to 78”. The thickness may range from .059” to .134”.

A stack of blanks is placed by a powered preload conveyor. This conveyor incorporates a backstop so the stack can be positioned square before individual chain driven rolls transport the stack onto a 12,000 pound capacity lift table. The lift table is a continuous-duty hydraulic pumping table which automatically maintains a constant pass line height by means of a photocell. After the stack of blanks has been lifted to the predetermined pass line height, an air cylinder lowers a vacuum head, allowing four vacuum cups to come in contact with the top sheet. The vacuum cups pick up the trailing edge of each panel, which activates a second air cylinder that provides the horizontal motion and pushes the sheet into a set of feed rolls. As the sheet moves into the feed rolls, the vacuum is automatically turned off at the cups, which releases the sheet. Air separators as well as a flex roll are incorporated to ensure single sheet feeding. As the sheet is moved through the feed rolls, a sensor mounted on the back side of the rolls signals the vacuum head to feed the next panel. The machine is capable of feeding fifteen boards per minute.

As a stack is completed, a switch built into the lift table is activated and the lift table automatically lowers, ready to accept a new stack.

The Automatic Feeder is just one of the many different types of vacuum feeders and stackers that The Union Tool Corporation has designed to solve material handling problems for modern industry.

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