

How to justify acquiring a flexible manufacturing system

his article will illustrate how a stamper can justify acquiring a flexible and complete manufacturing system for producing metal stampings.

The primary purpose of any capital investment is the profitable return on investment. Therefore, the metal forming system selected must improve productivity with emphasis on uptime and reliability.

## What Is a Transfer Press?

automatic-type press that combines a complete series of operations with a

minimum amount of material handling equipment.

A transfer press will do more than reduce the number of presses a stamper operates; it will reduce a stamper's investment, material handling, and labor as well.

It is equipped with multiple die stations through which a workpiece is transferred from station to station by means of a transfer feed system that is mechanically or electrically synchronized with the press slide. Dies for each station are separate and individually adjustable. All stamping operations from blank to finished part are completed in the transfer press.

## transfer press

When to use a

A transfer press is recommended whenever 4,000 or more identical stampings requiring three or more stamping operations are needed daily or when a family of parts, i.e., similar in size, shape, and thickness, are required.

Parts may have any configuration that can be grasped by gripper fingers or, in the case of larger parts, that can be lifted and moved along the transfer path with shovel-type fingers.

The trend in the stamping industry is toward the Just-In-Time (JIT) manufacturing philosophy, with transfer presses as the key system to produce metal stampings.

This concept requires short runs—as short as two hours—and frequent die changes. Die change in transfer presses can be completed in less than five minutes by pushing a single button. Press shut height, cushion stroke and tonnage, transfer, lift and clamp stroke, distance between transfer rails, press speed, and destacker parameters are all automatically changed.

All of these setup parameters are

stored in memory for each part number. When the part number is input, all setup parameters are automatically input. One transfer press system may produce anywhere from 5 to 12 or 15 different stampings.

Parts of almost every conceivable size and shape are produced in transfer presses. All press operations, from blanking to deep drawing and piercing to complex cam forming, can be per-

The transfer press produces stampings from coil stock fed through a roll feed, blanks fed from an in-line stock feed, or slugs fed from a hopper feed for impact machining components. In some applications, the transfer press is linked to another press that produces blanks automatically and delivers them into a command signal from the transmat.

Some basic considerations that must be made are:

- 1. Type and size of parts produced
- 2. Speed range
- 3. Stroke of press slide

The transfer press is a high-production,

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