

Die-Namic® Process



saves
over 900 production
hours a year in
precision coining
operation



John Kirker, Mgr. Manufacturing Engineering, checks Die-Namic die

The Minster Die-Namic Process was installed at Ledex, Inc., Vandalia, Ohio, four years ago to meet an uncompromising production requirement: 800 die changes per year in a precision coining operation.

It has performed to the complete satisfaction of Ledex. And here's why—

Ledex uses the Die-Namic Process to coin ball races in the stator of the Company's unique—and famous—rotary solenoids. The coinings are three helical raceways, deep at one end and shallow at the other, in which ball bearings ride as the solenoid turns through an arc of 15° to 110° under conditions of heavy shock and vibration, to convert an axial force into a rotary stroke, all in milliseconds.

About 600,000 rotary solenoids are produced each year by Ledex, in a range of eight sizes. There are 120 variations of the coinings.

Production records indicate that changing universal die components required .7 of an hour on the average with the dies used before the Die-Namic was installed. In addition, it took another .5 hour to set the die and adjust the shutheight, which is critical to the operation. Total average

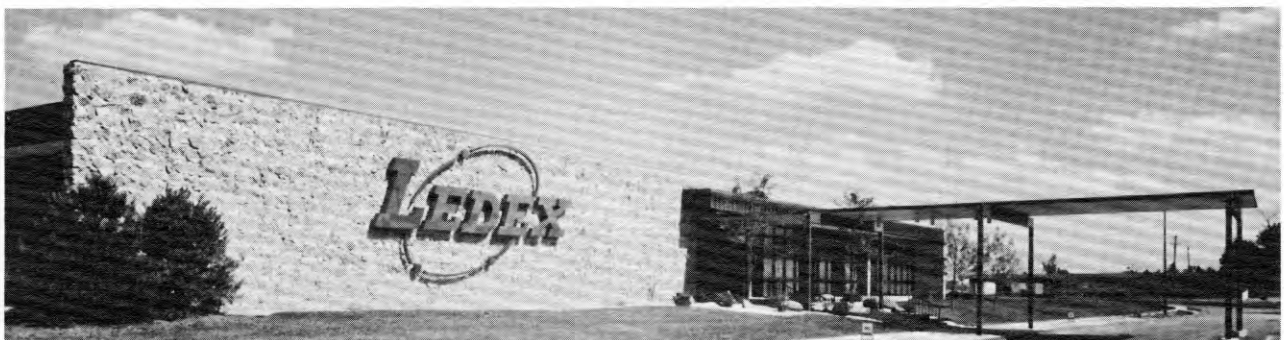
time to change die sizes was an hour and 12 minutes.

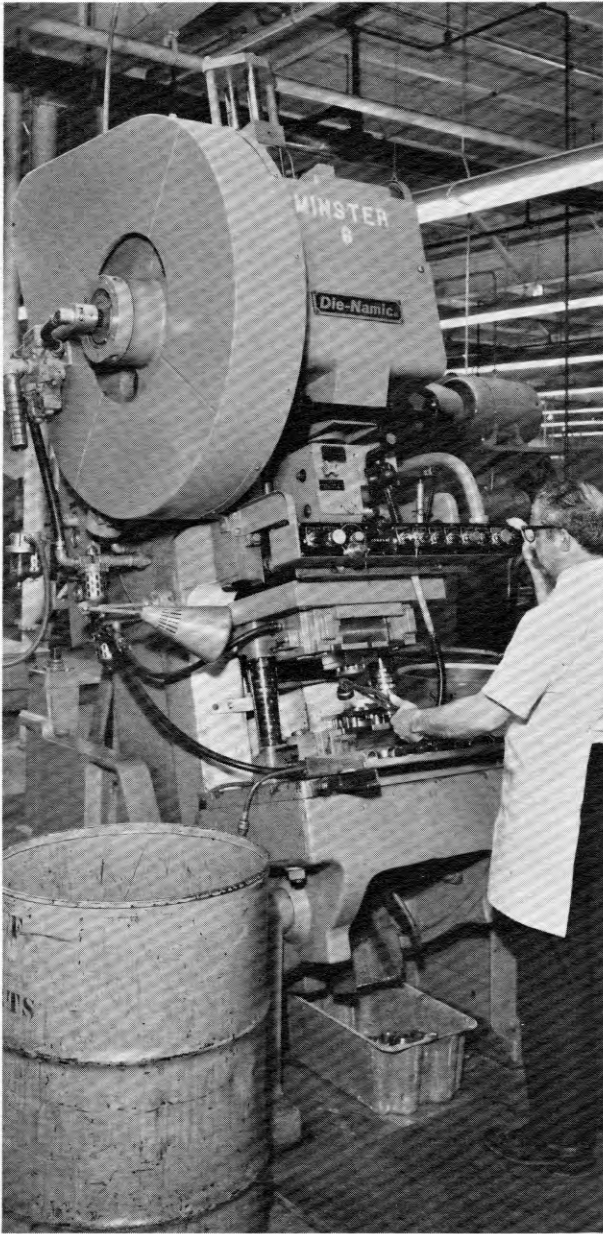
The Die-Namic saves at least one hour and ten minutes on every die change now. As John Kirker, Manager, Manufacturing Engineering, put it, "I've watched them change dies time and again. They usually do it between one and two minutes."

Two unique features make the time savings possible: first, the quick change die arrangement; and secondly, the shutheight indicator and power adjustment. Shutheight is printed on the edge of each die. After the die is in place, the operator pushes a button and watches the ram indicator readout to set the proper shutheight. Then he resumes production. Depth of coining is controlled to $\pm .001$ ".

With this kind of efficiency, Ledex changes dies for runs as low as five pieces and as high as 20,000 — efficiently — and have reduced costly stock inventories in the process.

The Minster Die-Namic #6 at Ledex is a 60 ton press, manual feed. The coinings are made in steel stators ranging in thickness from .049" to .134" and from 7/8" to 2-1/16" in diameter.

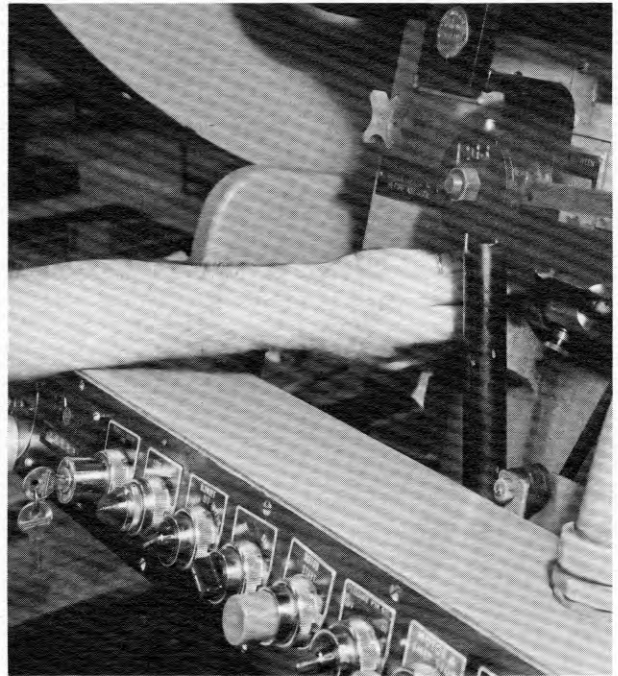




No. 6 Die-Namic Press at Ledex, Inc.



Neat, convenient die storage a few steps away from the press



Operator sets proper shutheight with power slide adjustment

