

Universal Electric Holds Lamination Concentricity with MASSIVE MINSTERS

Precision was the basis for purchase when Universal Electric Company, Subsidiary of ESB Incorporated, Owosso, Michigan, got its first Minster P2 Piece-Maker® press for lamination work in 1955. Precision is still a major reason for buying Minster presses but another factor has been added according to Kurt Porter, Vice President, Director of Tooling. He likes the sheer weight and mass of the Minster E2 Lamination press which provides the stability and accuracy needed to hold critical concentricity limits. He says, "The Minster press is stronger in the right places. It even looks heavier." The photo at left of the 300 ton capacity E2 Lamination press il-

lustrates the massive construction. Of equal importance for this class of work is the unequalled slide to bed parallelism built into the E2. "I buy Minster presses because their vertical and horizontal parallelism is the best. The gib and way design gives us constant accuracy for holding tight concentricity on our compound rotor station dies where we pierce both I.D. and O.D. at the same time," says Mr. Porter.

Concentricity of their laminations is an important factor at Universal in maintaining their well known reputation of producing "Precision Electric Motors".

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PRESS OPERATIONS

Universal operates four Piece-Maker and two E2 Lamination presses with speed averaging about 290 spm depending upon the die. They use all carbide dies and can get about 2 million parts between die grinds. Material is all cold rolled steel. The Minster presses are equipped with roller gear fixed feed length feeds which give them pin-point progression accuracy at high speed.

Because of the excellent performance of their early Minster presses Mr. Porter and his staff use Minsters for other motor production operations. S1-150 presses are used to blank and draw motor cases which then go to 400 ton Knuckle Joint presses for sizing and embossing. Motor end plates are stamped on an E2-300 using 14-stage progressive dies that pierce, emboss, coin and extrude in a variety of patterns and sizes as required.

Universal Electric . . . International in Scope but still a "family" company

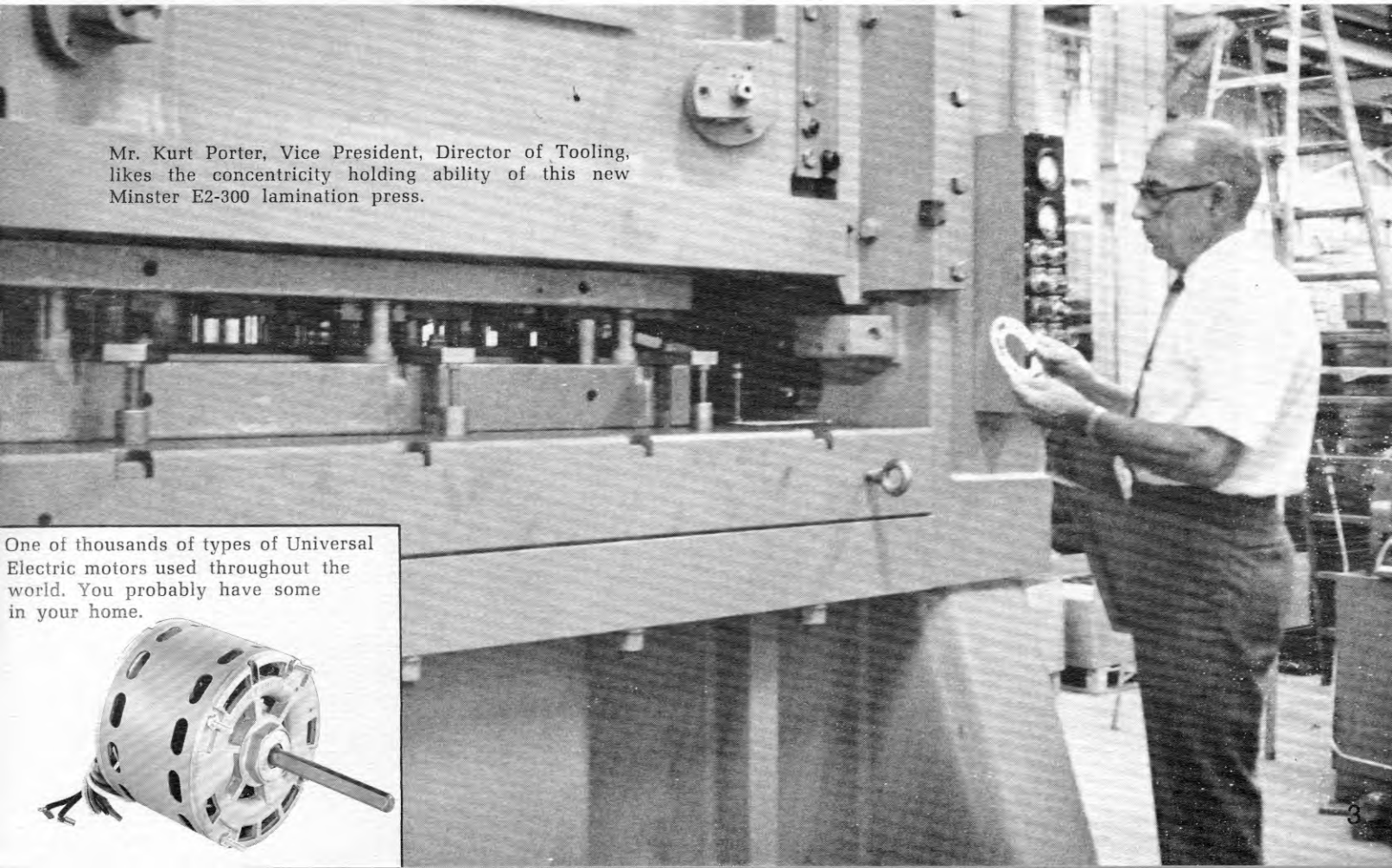
"Good motors, Universal" is what you hear when the phone is answered at any of the four plants of this progressive company which was

born in a rented loft at the beginning of World War II. Since its inception, all employees have been called "Associates" and are treated as associates in every way. Today there are over 1500 of them making this subsidiary of ESB Incorporated one of the largest fractional hp motor producers in the country with production capacity running into thousands of motors a day.

Strongly oriented toward application-engineering, Universal specializes in customized motors for aircraft, appliances, air-conditioning and electronics applications. They build over 1000 different models to customer specifications with biggest volume in shaded pole types. All laminations are produced at the Owosso, Michigan, plant where the company headquarters is also located. Here is where the special motors are manufactured. Lamination components for high volume standard motor production are shipped to assembly plants in Ripley, Tennessee, and Altavista, Virginia.

While OEM applications make up the bulk of Universal's production they also have a very large replacement market, making interchangeable motors which are sold through a large and efficient distributor organization.

Mr. Kurt Porter, Vice President, Director of Tooling, likes the concentricity holding ability of this new Minster E2-300 lamination press.



One of thousands of types of Universal Electric motors used throughout the world. You probably have some in your home.

