

TechUpdate

New Mid-Range Transfer/Progressive-Die Press Lineup

Schuler Inc., Canton, MI, introduces a new mid-sized range of standard progressive and transfer presses designed for automotive suppliers and contract stamping



plants. Designated the S series, the collection of presses includes three base models of progressive-die presses with press forces from 1100 to 1750 tons and 15 to 50 strokes/min. The series also has five basic transfer-press models that start at 1350 tons and increase to 3500 tons, having a variable-stroke range of 10

to 30/min. The slide and bed sizes are standardized to control costs while meeting a variety of process needs. For the transfer-press models, sizes range from 200 by 96 in. to 300 by 120 in.; progressive-die models have bed/slides from 144 by 72 in. to 240 by 96 in.

Standardized press designs help achieve faster unit delivery schedules and production cost-efficiencies, according to Schuler officials, resulting in competitively priced presses with

shorter lead times. Other press-design features include optional vibration mounts, along with air tanks and power units attached to the press body. This permits the use of a uniform pit design and size, and keeps the basement space more accessible for scrap-handling systems, reducing space, time and costs to

install pits and presses.

Two standard drive systems for the different press types determine motion characteristics. For complex forming operations associated with transfer-press applications, where lower drawing speeds are necessary through the working angles, a link-drive system generates a lower travel rate through the downstroke. An eccentric drive is used with all progressive-die presses to create faster stroke rates and, typically, higher output.

Other S-series features include an eight-point slide-guide system, with bronze inserts and wear-resistant glides that maintain alignment over the stroke length, and preserve accuracies over time. The accuracy and rigidity of the system ensure die alignment for longer tool life and higher part quality. Schuler also has incorporated its central slide-locking device that allows for rapid and secure locking/unlocking of the press slide in any desired position without the use of ram blocks. It also provides 2-in. overload travel distance as standard to help protect tooling and press components from double hits and misfeed damage.

For more information from Schuler Inc., write no. 360 on your reader response card.

Hemmer Handles 3-ft.-Wide Sheet

The Bradbury Co., Moundridge, KS, has added a new 38-in.-wide hemmer to its line of trim-shop equipment. Designated the Bradbury H2, the new unit expands on the capabilities of the 24-in. hemmer, and offers quick, simple setups and quick blank processing. The H2 simultaneously produces ¼- to ½-in. hems on each side of blanks from 5.5 to 39 in. in width. Strips as narrow as 3.25 in. can be hemmed on one edge. This unit easily turns out 100 ft. of hand-fed 24- to 29-gauge blanks per min. No tooling changes are required to switch between closed and open hems—simply turning an adjusting knob completes the change.

A wheeled base and a 115-V single-phase motor allow the H2 to be moved around the shop and plugged in wherever needed, without regard to the special wiring required for 460-V three-phase machines.

Bradbury's roster of trim shop equipment includes Bradbury long folders, Panther Cub II slitter/shears, uncoilers and recoilers, stand-alone sheet slitters, and portable rollforming equipment.

For more information on the firm's new 38-in. H2 hemmer, write no. 361 on your reader response card.



New Markets, New Capabilities with 2D/3D Laser Cutter

In its 25,000-sq.-ft. fabrication shop, 37-employee Marks Brothers Inc., Portland, OR, prides itself on taking on new and challenging jobs via its state-of-the-art equipment. Early in 2003 though, company management recognized several factors that prevented profitable production of complex parts

with 2D and 3D features.

Marks owned three laser systems but making preformed parts on these systems, in many instances, was labor-intensive due to required intermediate machining steps such as shearing, notching, punching and machining. These steps generated long processing times, resulting



in high part-manufacturing costs. A laser-equipment upgrade was needed.

The company selected the Domino 1530 high-speed laser-cutting system from Prima North America, Chicopee, MA.

Purchasing the system has provided many benefits, according to Jon Marks, president of Marks Brothers. The Prima system has reduced part costs by as much as 80 percent because it allows production of intricate parts with 2D and 3D features four times faster than traditional methods. And the system's five-axis cutting capabilities allow quick movement from raw material to a finished product due to elimination of the intermediate operations described above—in some applications as many as four operations. For example, the system's gantry-mounted cutting head performs two axes of rotation, so material can be bevel-cut, eliminating the requirement of carbide inserts for mechanical chamfering.

The addition of the Domino has provided Marks Brothers with access to new markets in applications that previously were difficult to handle, such as the ability to add holes or cut features on parts that have been completely formed. The company has been particularly busy

cutting features into preformed tubes.

Productivity also has soared. Marks says that despite a modest learning curve associated with the new system, employees quickly were able to produce parts much more rapidly, with processing times five times faster as compared to conventional machining.

Summing up the positives from the

laser-cutter purchase, Marks says: "Our production cycle is very active, creating new work efficiencies. We now are taking on jobs in new markets and have increased our business by almost 40 percent."

For more information on the Domino laser-cutting system from Prima North America, write no. 362 on your reader response card.

Pulsed-Fiber Lasers Designed for Marking

Pulsed-fiber lasers have become the preferred laser technology for identification and traceability marks for metals and plastics when their application has been determined to be either the most cost-effective, produces marks that are the most readable or integrates most easily with production operations.

That's according to Columbia Marking Tools, Chesterfield Township, MI, which has introduced 10- and 20-W laser marking systems utilizing pulsed laser technology that develops the same 1064-mm wavelength as Nd: YAG and Nd: YVO4 but are compact in design and air-cooled to eliminate costly water-cooling systems. The airflow is segregated from any electronic components, requiring no filter changing, and maximizing component life. Because the pulsed-fiber laser uses a doped-fiber technology, sensitive optical components are eliminated. The pulsed laser offers 90-percent useable power range compared to approximately 30-percent usable power range associated with YAG and YVO4 systems, according to company officials.

E-Z Mark software from Columbia Marking Tools enables the laser system to be tailored to customer requirements. The software applies a standard Windows-based user interface that reduces the operator learning curve. All standard marking functions include alphanumeric (linear and elliptical), bar codes, data matrix, UID (Unique Identification) and graphics. Also, all laser parameters are saved with each marking object, with numerous objects possible per mark. Part changeover is as simple as clicking on the next preprogrammed job to be marked.

The laser-marking systems include a laser-marking head with a focusing lens for a 100 by 100-mm marking area, a laser-marking-head controller box with a diode-pumped power source fiber-coupled to the marking head, and the E-Z Mark software package.

For more information from Columbia Marking Tools, write no. 363 on your reader response card.