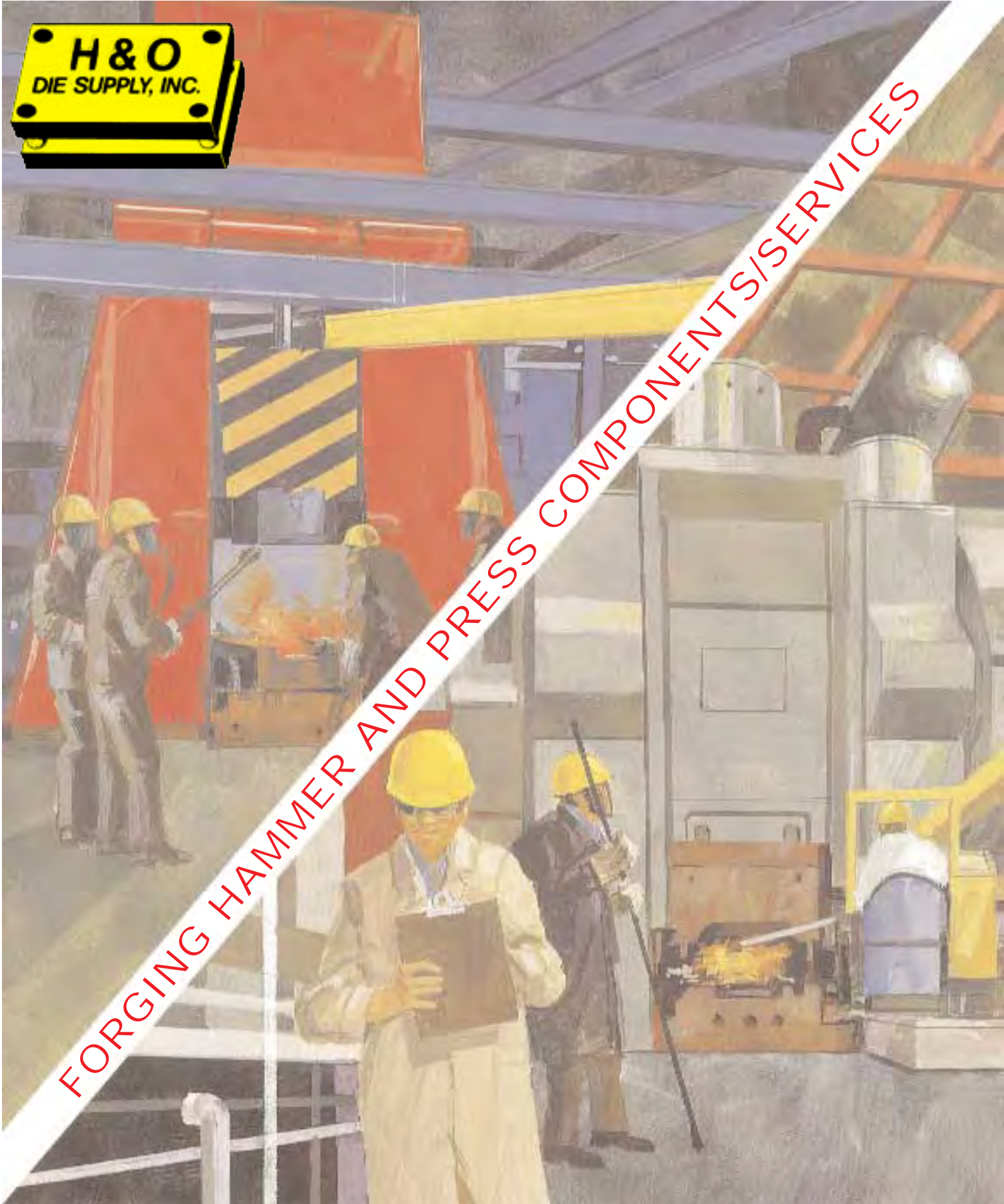




FORGING DIVISION



FORGING HAMMER AND PRESS COMPONENTS/SERVICES

SUPERIOR FORGING PRODUCTS AND SERVICES HELP KEEP YOUR FORGING OPERATIONS AT MAXIMUM PRODUCTION

COUNT ON QUALITY AND DELIVERY



SUPERIOR DIE SET CORPORATION was founded in 1923 with a concern for quality. Ever since, Superior's engineering philosophy, production methods, and quality control system have reflected that same unwavering dedication. As a result, Superior leads its industry in design, quality, manufacturing excellence, and product integrity.

With advanced production resources, deep and flexible inventories, and conscientious craftsmanship, Superior is positioned to deliver forging products and services according to your needs.

Efficient cost control in manufacturing requires proficiency from every Superior employee. At every level, the people at Superior are aware of the need for our company to stay competitive. The benefits to our customers are measured in quality products, practical costs, and on-time deliveries.



BOLSTER REPAIR

An important component of press forging is bolster repair. Repair bolsters are cleaned and inspected to determine which component parts need to be reworked or replaced. After necessary repairs are made, bolsters are returned to customer's forging specifications and tolerances.

BOLSTER FOR AUTOMATED FORGING OPERATION

A state-of-the-art bolster with built-in trim stations, machined by Superior for high-production forging, trimming, and hydraulic clamping for quick-change unloading.



BOLSTER MANUFACTURING

This heavy-duty bolster, for an 8,000 ton forging press, weighs over 137,000 pounds and was completely manufactured and assembled at Superior.



T-SLOT BOLSTERS OR RAM PLATES

A Superior T-slot bolster plate, weighing over 15 tons, is checked for dimensional accuracy and specified surface finish. Superior can manufacture bolster or ram plates to your needs and specifications.



SUPERIOR FORGING PRODUCTS AND SERVICES HELP KEEP YOUR FORGING OPERATIONS AT MAXIMUM PRODUCTION



FLAME CUTTING

Close tolerance single and multiple burn-outs are produced on Superior's computer-programmed, multi-torch flame cutting machines. Superior's ability to flame-cut from customer's drawings saves machining time and costs while expediting delivery.

PLATE CAPABILITIES

From simple burn-outs to complex ground and machined contours, plates are expertly flame cut and manufactured to customer specifications.



WELDING

Superior's welding craftsmen use MIG, TIG, and submerged-arc welding in manufacturing and repairing forging hammer and press components.

*SUPERIOR FORGE-RITE™ 4340 STEEL

Superior FORGE-RITE™ steel is a proprietary material specially formulated for the manufacture of forging equipment and tooling. It is a tough, shock-resistant, oil-hardening nickel-chromium-molybdenum steel with optimum grain flow characteristics. Its main attributes are high hardenability, strength and toughness.

*SUPERIOR 4130 STEEL

Superior 4130 steel is a holder block quality steel. It is supplied heat-treated to 300 Bhn. (262-321). This steel is an optimum balance between machinability and hardness while possessing the flexibility of the AISI 4100 Chrome-Moly series of steel.

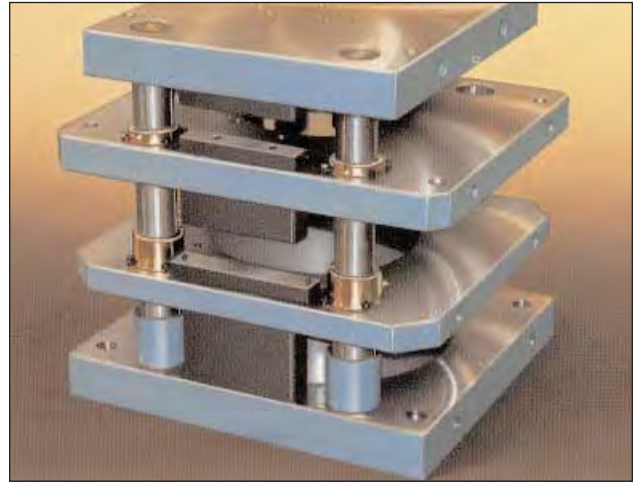
*SUPERIOR 1020 and 1045 STEELS

Superior 1020 and 1045 steels are medium carbon materials with high tensile strength, strong mechanical properties, and optimum machinability. These are satisfactory for most manufacturing and machining operations.

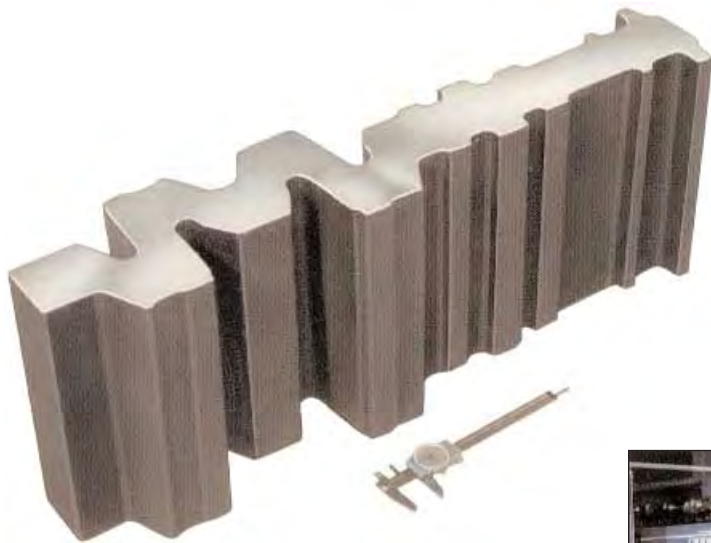
**Superior raw steel inventory is available in a wide range of thickness for the above steel grades. Contact our Engineering Department for specifications and availability.*

SUPERIOR FORGING PRODUCTS AND SERVICES HELP KEEP YOUR FORGING OPERATIONS AT MAXIMUM PRODUCTION

TRIM PRESSES



Complex, multi-platen trim die sets and tooling are engineered, manufactured, and assembled at Superior in coordination with customer forging engineers.



TRIM TOOLING

Superior's trim tooling sets include such components as this burned out trim punch for a forged crankshaft, torch-cut from 12-inch FORGE-RITE™ plate and requiring minimum machining.

CNC MACHINING

High-speed, high-precision CNC machining centers provide Superior with ultra flexibility and cost-efficient production capability on forging products.



HAMMER COMPONENTS AND REPAIRS

Superior offers a complete range of forging hammer components – new or reconditioned. New, heavy cast steel hammer frames and frame repair services are available.

Hammer bases can be reworked at reasonable costs due to Superior's accelerated set-up times and close-tolerance machining capabilities.

The normal service life of rams and guides can be extended through Superior's precision grinding methods on the vee surfaces. In addition to common wear components, Superior reconditions yokes, roll heads, and steam cylinders for forging hammers of all sizes.



FORGING HAMMER RAMS

New forged or cast-to-shape rams are manufactured for hammers rated up to 50,000 pounds. Superior also reconditions worn or cracked rams by welding, stress-relieving, and remachining all critical services.



SOW BLOCKS

Superior will weld to repair and machine worn or cracked sow blocks, restoring them to your operational specifications. New sow blocks are also supplied and manufactured to customer specifications.



NEW AND RECONDITIONED GUIDES



Superior can manufacture any set of guides to meet your hammer specifications. All new and reconditioned guide vees are surface ground to a micro finish of 63 or better.



FRAME MACHINING AND REPAIR

Used frames are sandblasted and inspected for cracks and wear. All frame areas – guide pockets, top and base surfaces – are machined as a matched pair. Superior has the patterns and capabilities to furnish new cast steel frames.

SUPERIOR STOCK FORGING PRODUCTS



COMPONENT PARTS

Component parts, such as ram bushings, clamp bushings, and piston rods are in stock items at Superior. Also available are rod clamp assemblies, gland bushings, rod packings, piston heads, piston rings, keys, and dowels. All are manufactured of the highest quality materials, meeting or exceeding original specifications. Custom component parts can be manufactured upon request.



PISTON RODS

Superior manufactures and stocks standard replacement piston rods for your air-powered forging hammers. Special non-standard and steam hammer rods can be manufactured to your specifications.

OTHER SERVICES

Superior Die Set Corporation is a leader in the design and manufacture of fine die sets. In addition to the services offered by its Forging Products Division, Superior offers a complete range of engineering and manufacturing services for the metal-working industries.



MEMBERSHIP

AFS
SME
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AWS
FIA



H&O Die Supply

7200 Interstate 20 Kennedale, TX 76060
Phone: 214-630-6660 Fax: 214-630-6693

www.hodie.com