

# Open Die "Hand" Forgings

## OPEN DIE FORGINGS

Open Die Forgings, also known as "Hand Forgings" or "Forged Block," are manufactured in flat dies, eliminating the requirement for nonrecurring tooling. They are characterized by specified grain directions (ST - Short Transverse; LT - Long Transverse; and L - Longitudinal), and are produced in many shapes, from the classic "block" configurations to bent, stepped, or curved shapes.

Reasons to choose Open Die Forgings include:

- The cost of developing closed die forging tooling is prohibitive.
- Engineering of the component is not yet finalized and creating the closed die tooling is premature.
- The part requires forged properties and machining an open die forging is the most economical method to achieve your goal.
- The leadtime for developing closed die tooling may not support your program.

Aluminum Precision Products offers a wide range of Open Die Forging alloys, configurations, tempers and sizes. Both our Santa Ana and Oxnard facilities in California produce Open Die Forgings. Our deliveries range from 2 to 6 weeks depending on the shape, alloy and temper of your requirement.

### ALLOYS:

2014, 2024, 2219, 2618, 3003, 4032, 5083, 5086, 6061, 7049, 7050, 7075, 7079, 7149, 7175, 7249, and others.

### TEMPERS:

All tempers including -F, 0, -01, all T tempers and H tempers, including stress relieved (-T7352, T7452, etc.). Specific alloys require specific tempers.

### PROCESSES:

Where required, we offer precision machining of the rectangle surfaces to tolerances of  $\pm 0.010/-0.000$ . We perform mechanical testing, ultrasonic inspection and stress relief testing (when required) at our own facilities.

### SIZE CAPABILITIES:

Weight: maximum weight of 6000 pounds net.

### DIMENSIONAL:

Rectangles:

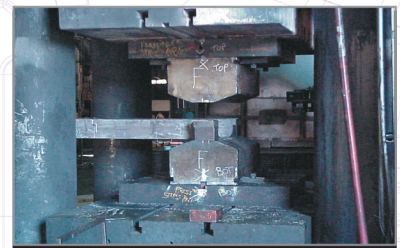
ST - up to 24 inches (610mm)  
LT - up to 48 inches (1,220mm)  
L - up to 360 inches (9,140mm)

Biscuits: up to 48 inches (1,220mm) diameter

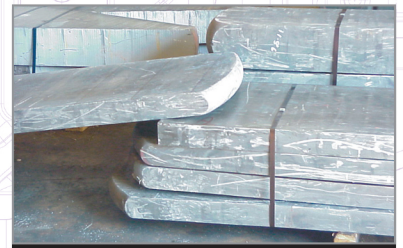
Rounds: up to 30 inches (760mm) diameter, 150 inches (3,810mm) length



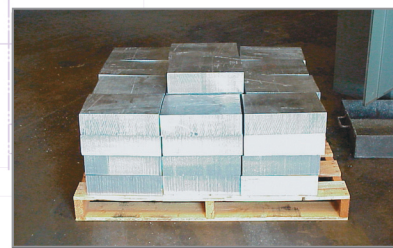
Preparing for stress relief.



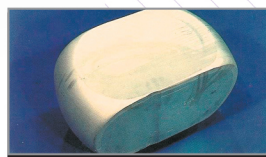
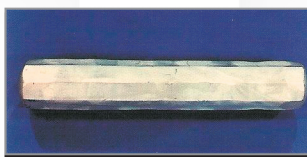
Stress relieving on 8000-ton press.



Open Die forging preparing to ship.



Cut to size Forged Blocks.



We also offer special shapes as well as round hollows (trepanned and/or bored).

**For Hand Forging Quotations Contact Joe Bennett**  
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