



## Mate's SuperMax™ Saves HVAC Equipment Manufacturer Over \$51,000

Increased Uptime and Extended Tool Life Takes the Heat Off Tooling Budgets

Increased machine uptime and tool life are always at the top of an opportunities for improvement list. Mate's sales engineers have years of experience on the shop floor so they can readily spot issues that impact performance. When a leading manufacturer of commercial HVAC equipment accessories began looking for answers to their uptime and tool life questions, they turned to the experts at Mate Precision Tooling.

### SuperMax Extends Tool Life

Two simple ways to increase tool life are proper tool maintenance—keeping the tools sharp—and proper die clearance, which will minimize punching force and form a clean hole. This company employed excellent maintenance practices across its eight machines, so the Mate sales engineer began looking for other solutions.

After evaluating the products being made and steel used, the Mate sales engineer recommended our proprietary next generation SuperMax™ coating, specifically formulated for punch press tooling. Acting as a barrier between the punch and sheet metal, SuperMax greatly improves stripping performance. SuperMax is extremely lubricious and has a lower friction coefficient of 20%, which is critical to increasing wear resistance. Tests and customer use show that SuperMax not only increases punch life between two to eight times, it also helps reduce die wear.

After testing SuperMax, the company saw improved tool life. Since they didn't have to stop the machines for tooling maintenance, the company also saw increased machine uptime. All their punch orders now include SuperMax.

### Increased Uptime and Tool Life Adds Up

Mate presented its estimates of the additional savings by using SuperMax, which covered three areas:

1. Increased machine uptime,
2. Increased punch tool life, and
3. Increased die tool life.

First, there was increased machine uptime. By extending tool maintenance intervals, Mate estimated a conservative 5% increase of equipment uptime. At a \$50 per hour shop rate x 2,080 hours per year x 5% x 8 machines, the estimated savings was \$41,600 per year!

The company purchased \$12,500 in punches with SuperMax. By reducing the quantity of punches purchased and adding 20% to the balance for SuperMax, their savings ranged from \$5,000 to \$10,625 (an average of \$7,812) on the punches alone as shown below:

- $\$12,500/2 \times 1.20 = \$7,500$  for SuperMax;  $\$12,500 - \$7,500 = \$5,000$  savings
- $\$12,500/8 \times 1.20 = \$1,875$  for SuperMax;  $\$12,500 - \$1,875 = \$10,625$  savings
- Average =  $(\$5,000 + \$10,625)/2 = \$7,812$

Finally, customers can expect a reduction in die wear when using SuperMax due to the increased lubricity. Using the company's purchases of \$10,000 in dies, Mate applied an estimated 20% reduction, or additional savings of \$2,000.

The total estimated delivered savings to the customer based on a minimal investment in SuperMax coatings was \$51,412!