



After being retooled with MoldMAX, this four cavity Fly Box leg mold is experiencing a dramatic decrease in cycle time, from 80 seconds to 46 seconds.



Productivity increased 50 percent after retooling with MoldMAX. Where First Plastics was producing 1,000 finished units per week they are now producing 1,500 in the same time.

MOLDMAX® APPLICATION: SKATE/BIKE RAMP MOLDS PROFILE: FIRST PLASTICS CORP.

Just as extreme athletes often seek faster speeds, the company who manufactures the popular X Games Fly Box skate/bike ramp sought faster cycles in molding the toy's plastic components. The Fly Box, manufactured by custom plastic injection molder, First Plastics Corp., features two facing ramps supported by a middle tabletop. Assembled, it measures 24" wide by 96" long by 18" high.

CHALLENGE:

According to First Plastics' president, Ed Mazzaferro, F & M Tool built a total of six tools for this project. These tools were made from P-20 steel. While the finished plastic pieces that were being produced were acceptable for use on the Fly Box, the surfaces showed signs of warping which left a "bumpy" surface that was unattractive. The surface of the table also had imperfections, and the rib section on the underside caused distortion to the top.

SOLUTION:

F & M rebuilt the single cavity tool for the 24" x 24" x 3" tabletop using Materion Performance Alloys' MoldMAX LH. This high performance alloy is specially designed for the plastic processing industry. "This improved the look of the tabletop and eliminated the distortion. Cycle times were also reduced from 67 seconds to 40 seconds," said Mazzaferro.

MoldMAX provides a unique combination of thermal conductivity and strength that yields important benefits for molders and the molding process. This high thermal conductivity results in shorter cycle times as the mold heats to operating temperature faster. Once the plastic is injected, it is able to reach a uniform temperature more quickly than with steel tools. This uniform cooling results in better part quality, decreased warping and greater part strength.

First Plastics was so pleased with the results of the MoldMAX part for the table, they decided to also rebuild the tools for the leg section using MoldMAX. The leg mold has four cavities. The new MoldMAX part has nearly cut the cycle time in half, from 80 seconds to 46. According to Mazzaferro, prior to retooling his company produced 1,000 finished units per week. Now due to these reductions in cycle time, they are producing 1,500 finished units each week, a 50 percent increase in productivity.

The company is eager to repeat these positive results, and plans are currently under way to rebuild the ramp tools for even greater speed and efficiency.