

INDUSTRY
PAPER & PRINT

APPLICATION
PAPER FOLDING MACHINES

PRODUCT
MEGAFLAT



SITUATION/APPLICATION

Bookbinding is the process of physically assembling a book from a stack of paper sheets. It consists of many operations such as cutting, folding, and gluing. A book might need dozens of operations to complete, according to the specific style and materials.

Books bound by traditional methods often do not stay open by themselves due to the structure of the paper. To avoid this, pages are “double folded”. The paper structure is “broken” on two lines and permits the book stay open. Even though double folding is a simple innovation it requires high precision and pages need to be accurately gripped as they go through the folding process.

THE PROBLEM

A manufacturer of bookbinding equipment contacted Megadyne requesting a drive design for a new paper folding machine. Previous designs did not always fold the paper correctly. The drive belts did not have the consistent, stable grip required to work together as a set to “sandwich” the paper between them with sufficient friction. Additionally, the belts would leave marks on the paper and their overall life was short as the cover material wore away quickly.

THE SOLUTION

Working closely with the manufacturer, Megadyne supplied Megaflat with Yellow 50 Shore A hardness polyurethane coating for testing. This rigid carcass belt design produced consistent folding results while eliminating the paper marking that had been a problem on previous drives. A reduction in belt wear was also realized.

THE RESULT

Extensive testing proved conclusively that the new drive design exceeded all customer requirements. Proper friction between belt and paper executed a perfect double fold while a cost saving reduction in scrap was realized with the elimination of marking on the paper. Exceptional wear resistance greatly contributed to an increased belt life that combined with the other attributes of the new design played a large part in making the new machine a great success in the marketplace.

