

C O S M O S - K A B A R

CASE STUDY



**TOOLING
TECHNOLOGY**
A TOOLING TECH GROUP COMPANY

COSMOS-KABAR CASE STUDY

CUSTOMER: Cosmos-Kabar is the largest manufacturer and supplier of industrial radio frequency (RF) heat sealing equipment and parts in the United States – simply explained as welding around the edge of plastic bags. Its expertise in plastic technology goes all the way back to 1945 when Cosmos Electronic Machine Corporation was founded, growing to its current size through acquisitions of Kabar Manufacturing Corporation and D&L Die Corporation.

Offering more than just RF equipment, the company provides complete turnkey solutions inclusive of tooling and fixtures, all customized to each customer's particular manufacturing needs. The systems are available in a variety of press design configurations including turntables, shuttles and in-line indexing systems, as well as fully automated multi-function lines with each system customized to particular manufacturing needs.

These RF welding equipment and RF heat sealing machines are used across multiple industries in diverse sealing applications that include air mattresses, blister packages, boat covers and seats, blood bags, blood pressure cuffs, clam shell packaging, convertible auto tops, mini blinds, pool liners, tarps and tents, to name just a fraction of the equipment usage.

Challenge:

The Cosmos-Kabar welding machines use a pneumatic press to clamp down on the material being sealed. This requires attaching a die to the press to form whatever shape is being welded. Although the materials being joined don't get as hot as in traditional welding, the systems do heat up and there can be a risk of burns from the plates or electrodes.

Solution:

To eliminate this risk, Cosmos-Kabar began implementing the Segen Quick Change System almost 30 years ago as an option with its machines.

Prior to offering Segen, the company used a mechanical-style locking bar to attach the die to the platen. This required the operator to wear safety gloves and then reach their hand underneath the press to manually lock the die into position with hardware and hand tools. Potentially, the press could come down and injure the operator.



Cosmos-Kabar CAM3127

With the Segen pneumatic work holding system, there is no need for an operator to place their hands within the press bed area to access the dies. Instead, the die is placed on the lower bed, the press is lowered, the operator hits a remote button for a quick burst of air pressure so the Segen cylinders can unlock to receive and locate their mating steel retention knobs.



A simple push of a button controls the air pressure and press jog mode.

The operator then removes air pressure from the cylinder to lock the tooling into place until air pressure is applied again to release it. Using anywhere from two to four cylinders in these applications, the holding power of the Segen system assures a secure, fail-safe hold...even if pneumatic pressure is lost.

In addition to improving safety, the Segen system saves significant time in setting up and changeovers. Without Segen requires the operator to physically pick up and transport the die to the press, potentially

remove safety guarding to access the locking bar, and release the air to manually raise the press. This is a 10–15 minute process whereas initiating the Segen work holding system takes about 5 minutes; a 100–200% productivity increase.

Cosmos-Kabar offers, and encourages, customers to invest in the Segen Quick Change system offered as an option on its equipment. However, about 85% of the company's customers choose to go with this approach, especially given the safety benefit. Segen is especially effective for the turntable and shuttle options. The operator simply places the tooling on the tray, that station then rotates under the press, the operator locks the tooling, and the press cycles and rotates back out.

The Segen cylinders have proven to be extremely durable and last the lifetime of the RF system. To support customers' changing production needs, Cosmos-Kabar does stock Segen knobs in a couple of different sizes enabling interchangeability and the ability to store tooling with different sized knobs to swap them in or out.



Retention knobs in unlocked position.



Segen tooling in the locked position.



TOOLINGTECH GROUP

**For more information
on Tooling Tech Group's
thermoform tooling capability,
call 231-400-4884.**



COMPANY OVERVIEW

Tooling Technology, originally founded in 1982, specializes in providing thermoform tooling as well as rotational and blow molds for producing plastic components and structures. Equipped with its own aluminum foundry, Tooling Technology handles all phases of the tool build in-house, from design and pattern to fabrication and finishing. Additionally, the company is home to the Segen Quick System for simplifying industrial setups, changeovers, workholding, clamping, fixturing and alignment. In 2018, the company became one of the Tooling Tech Group of companies.

Tooling Tech Group builds custom automated systems for assembly, joining and inspection as well as tooling for a variety of applications including thermoform molding, high compression composite molding, blow molding, rotational molding, die casting, and stamping. Industries served include automotive, appliance, lawn and garden, agricultural, aerospace, marine, and off-road vehicle industries, among others. Through organic growth and acquisitions, the company has become the largest tooling provider in the United States with 650+ employees, 13 modern facilities and over 1 million square feet of manufacturing space across four states.

The depth and breadth of our capabilities is achieved through the combined experience of our company units, with each of these companies being in business for 30+ years, providing both extensive industry experience and financial stability that you can rely upon. Our unique differentiator is the ability to provide all tooling services from design to engineering to simulation to machining to fabrication to try-out all within one company. This single source ability can help to streamline your business operations and simplify your life. We take full responsibility for quality, delivery, and cost management of each project starting at concept through “on time, every time” delivery.



TOOLING**TECH** GROUP

Tooling Tech Group
Corporate Offices
200 South Alloy Drive
Fenton, Michigan 48430

Tel: +1 (231) 400-4884

TTG Tooling Technology
Main Office
100 Enterprise Drive
Fort Loramie, Ohio 45845

Tel: +1 (937) 295-3672

ToolingTechGroup.com