

# Dissatisfied Assembly Manager Finds A Better Way To Save On Tool Costs



## QUICK SUMMARY

### The Challenge

- Provide a quality product to customers on time while controlling costs.
- Inconsistent and short tool life from Maus' expanders.
- Halting production due to frequent tool breakage.

### The Solution

- Tool life trial to compare Elliott's 24 Series to Maus.

### The Results

- 2,500 expansions from the 24 Series using a single expander, mandrel and roll set.
- Reduced tooling expenses by nearly \$700 per week.
- Saved 3 man hours or more for every 24 Series expander in tool breakage and repair time.

## The Challenge

Chart Cooler Service Company, Inc., a US based heat exchanger manufacturer, has been dealing with the common challenge of controlling costs, but still providing a quality product to its customers on time.

As a company that manufactures and services heat exchangers, tool expenses are a major cost that has to be controlled. Tool costs are primarily driven by two factors, the initial investment for the tools and the tool life. Superior tool life dramatically cuts costs and reduces rework and operator headaches.

In order to meet their customers' demands, Chart Cooler's tool life must be consistent and reliable so that they can produce the most satisfying results. Chart Cooler had initially chosen Maus' expanders for their low initial cost, but has

been continually challenged with Maus' inconsistent and short tool life.

Darrell Simmons, Assembly Manager at Chart Cooler, faced trying to forecast the right number of tools for upcoming projects. Because the tool life from the Maus' expanders varied so greatly from one expander to another he was left with the decision of purchasing more expanders than he needed or risking a shortage that could require extra time to purchase more from his supplier.

Because every minute of production was critical Darrell was regularly purchasing \$900 to \$1,000 per week in expanders and expander parts.

Because of the short tool life he was experiencing from the Maus' expanders his team was losing productivity. Every time there was an expander, mandrel or

roll break, production was halted while the broken pieces were retrieved out of the vessel. Replacing the broken components could take another 10 – 15 minutes of production time.

Darrell found these challenges to be unacceptable and was ready for a better solution.

## The Solution

Darrell Simmons chose to do a trial test of Elliott's 24 Series Condenser Expander to compare its tool life to their current expander in order to determine if it could lower his tool costs and improve productivity. Elliott's 24 Series was specifically designed to provide the longest tool life of any condenser expander.

The tool being tested was an Elliott 24 Series 24134-12 for ¾" outside diameter



**“Elliott’s 24 Series Tube Expanders have incredible tool life. Elliott’s 24 Series is saving me over a thousand dollars per month.”**  
 - Darrell Simmons, Assembly Manager

### Tool Life Comparison By Number Of Expansions

Part	Maus	Elliott 24 Series
Expander	300 - 400	3,500+*
Mandrel	100	2,500
Roll Set	175	3,500

carbon steel tubes. The 24134-12 has a 12” reach.

During the trial Darrell and his team experienced a significant improvement in tool life. The following chart illustrates the difference in the number of expansions between the two expander brands.

In addition, sometimes the Maus’ mandrel would break after only 5 expansions. The testing showed that the Elliott 24 Series expander lasted 6 to 7 times longer than the Maus’ expander.

Darrell reported that his team continued to use the Elliott 24 Series expander long after the trial was over, and that they were pleased with the consistent tool life. Not only was the tool life more consistent and longer, the quality of the rolled joined was excellent.

After the trial test was complete Darrell commented that even though Maus had a lower initial price. The investment in the Elliott 24 Series was by far the better choice.

### The Results

Using Elliott’s 24 Series expander, Chart Cooler Service Company was able to get more than 2,500 expansions with a single expander, mandrel and roll set. The expander also never experienced any breakage or malfunctions throughout the entire test.

Because of the increased tool life and less variability from one expander’s life to another Darrell is able to make better forecasts on the tools he’ll need for a project allowing him to purchase only what he needs. In tool purchases alone Darrell was able to reduce his expense from \$900

- \$1,000 per week to an average of \$315 per week.

In addition to the direct savings in tool costs, Darrell’s team experienced a significant improvement in productivity. For every tool break his team would spend 20 – 30 minutes retrieving the broken pieces and assembling a new tool. With the Elliott 24 Series’ extended tool life his team would have to replace at least six Maus’ expanders for every one Elliott 24 Series expander. That’s a savings of 3 man hours (6 x 30 minutes) or more for every Elliott 24 Series expander!

With the help of Elliott’s 24 Series Darrell was able to go from a dissatisfied assembly manager to being very pleased that he was able to find a way to significantly cut his tool expense and increase productivity all at the same time.