SYNERGY
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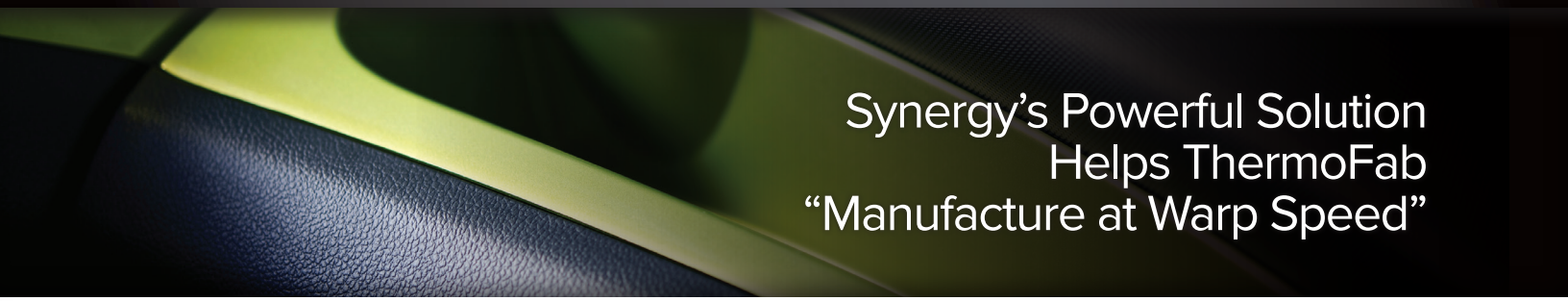
CASE STUDY



Synergy's Powerful Solution Helps ThermoFab "Manufacture at Warp Speed"

Only 39 days to transform ThermoFab into a company that can manufacture at warp speed, faster than any of our competitors."

ThermoFab

ThermoFab specializes in the thermoforming of high-quality plastic enclosures for a wide range of medical, industrial and computer products. Located in Shirley, Massachusetts, the company believes in achieving perfection and strives to be a leader in the thermoforming industry through its use of innovative and award-winning design and manufacturing techniques.

Concerned about increasing competition from Chinese manufacturers and the shrinking available market, ThermoFab realized it needed to make dramatic changes to solidify its leadership. ThermoFab president Tom King researched various business strategies and became interested in the Theory of Constraints (TOC), a management strategy developed by Dr. Eliyahu Goldratt. King realized that TOC was a solution that could help differentiate the company and began implementing the strategy. The changes he saw were significant.

"By incorporating TOC, we were able to perform some fast turn-around times," explains King. "We started receiving our raw materials once a month and ordering materials more efficiently. We also made ourselves a complete thermoforming solution for our customers by creating an in-house painting facility and employing cell manufacturing techniques."

Even with these improvements, ThermoFab was still well below the 100% on-time delivery rate that it hoped to achieve. It was still expediting more than it wanted. With a company culture based on continuous improvement, ThermoFab sought ways to improve its efficiency.

Implementing a solution

ThermoFab had been a Lilly Software VISUAL Enterprise customer since 1998, when it purchased the system to help streamline operations. In May 2003, King decided to attend a seminar where Eli Goldratt and Lilly Software CEO Richard Lilly discussed the Theory of Constraints and talked about how Lilly's DBR software could help make a dramatic difference in plant throughput. King recognized that TOC and the corresponding production scheduling techniques known as Drum-Buffer-Rope (DBR) worked successfully in a job shop environment. He had already seen great results on his own and wanted professional assistance to receive higher returns. King brought the message back to his staff in June and signed on for a 'Fast Track' implementation in early August. "Our goals were to improve on-time delivery, improve customer service, increase sales, and reduce our lead time to a level our competitors could not match. I knew TOC and DBR would take us there and position us ahead," says King. "Our competition had just started talking about Lean. We have been using Lean principles for ten years. We wanted to take our operations to the next level."

ThermoFab went 'live' with the software on September 16th, just 39 days after signing the contract. "Only 39 days to transform ThermoFab into a company that can manufacture at warp speed, faster than any of our competitors," reports King. "We are exceeding all of our plans and expectations." The original 'go-live' date was set at the end of October, but that schedule was surpassed by 50 days.

The company's transformation has been due entirely to the hard work and dedication of ThermoFab employees and the support of the implementation team, which trained ThermoFab employees on DBR concepts and worked with them to inject the DBR process into their everyday procedures. "They approach DBR from a 'real world' anufacturing background. I don't look at Infor as a software company. Infor sells solutions to make manufacturers more profitable and the software is one of many tools."

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Real results

ThermoFab has seen significant benefits from applying TOC and implementing Infor VISUAL DBR. In an effort to adapt to the new principles, ThermoFab changed the way it assigns and controls work in the plant. With these changes, the average lead times for the high-quality pressure-formed plastic enclosures that the company makes have decreased 50%. With one particularly difficult part, ThermoFab reduced the manufacturing time from 45 days to just five days.

"We produce thermoformed plastic parts and assemblies where the volume doesn't justify injection molding and other high-volume techniques," says King. "Typically we'll produce 50 to 100 units per month for a customer but we have some products that we do in lots of as few as five units. We quote six to eight weeks' delivery and, up until now, we've had a very difficult time making good on those promises. All of a sudden with DBR, we're shipping everything on time—even the 'rush' orders."

When ThermoFab first started using the techniques, it believed the biggest constraint was in the paint prepping area. After working through late orders, it quickly realized that it was producing parts faster than sales and that the real constraint was the market. In the first month of TOC consulting and through re-evaluating its business using throughput measurements, ThermoFab was able to recognize hidden profit and take on new business. With old cost accounting methods, ThermoFab had been turning away orders that appeared to offer low margins. The company realized that with more accurate business metrics and improved delivery, these jobs could be profitable and added ten percent revenue in the first three months of using DBR. With shorter lead times and more scheduling flexibility, ThermoFab offers its customers what Goldratt refers to as the "unrefusable offer."

"If we don't ship on time, we offer to pay a penalty," says King. "This shows our commitment to quality and service. With one of our stricter customers, we offered them a contract to ship twice a month instead of once a month. We put the unrefusable offer on the table and got a one-year contract and a price increase."

Now that the software is in place to support the new DBR way of managing production, King looks forward to even better results. "It's never good enough," he says. "We can always improve more. After operating one way for 25 years and then using DBR for only three to four months, we find it hard to believe the dramatic improvements we've seen

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