



Company profile:

Hostetler Sales & Construction

Buffalo, Missouri

70 employees

Metal truss manufacturer

Challenges:

Long setup times

Wide variety of part sizes

Bluco modular solution:

Custom Curved Floor Rail

Custom Welding Tables

Rolling Bridge Legs

Sometimes, it's all about who you know ...

When Hostetler Construction developed its unique steel truss system over 50 years ago, the goal was to help customers build their dreams. Now, the company's engineers had a dream of their own — to take production to the next level by improving efficiency, safety practices, and final part quality. They knew it would be a complex process, and they'd need to work with multiple vendors to make it happen. Luckily, their first call kicked off a series of events that led them to a Bluco® modular fixturing solution. A solution that would ultimately integrate all the new tech they were bringing on board, and provide the foundation needed to achieve their operational goals.

RAISING THE BARn: COLLABORATION DELIVERS RESULTS

The project started when the crew at Hostetler called on Fronius to help them achieve higher quality welds by converting to wire (MIG) from traditional stick welding. With step one of Hostetler's plan underway, Fronius introduced the team to Andersen Industries. Their WELDPRO 360 MIG Booms would integrate with the new Fronius equipment while eliminating cord clutter that could cause tripping injuries. Hostetler's Lead Engineer, Micah Swartentruber, wanted to check out the booms in person, so Andersen referred him to Bluco's Validation Center where he could see multiple booms in use. "Andersen told us 'just call Bluco and see how they like their boom,'" says Micah. It was then that the total solution began to take shape. *(Continued)*

WE WERE USING OLD-FASHIONED
FIXTURING THAT WE WELDED
TOGETHER FOR EACH PROJECT ...
IT GOT TO BE EXTREMELY TIME-
CONSUMING. WE WANTED TO BE
MORE EFFICIENT AND MORE FLEXIBLE.
- MICAH SWARTZENTRUBER, ENGINEER



Traditional fixturing falls short

Before making a trip to Bluco's Naperville, Illinois facility, Micah called one of their Senior Sales Engineers, Todd Bennett, and the conversation turned to fixturing. "We were using old-fashioned fixturing that we welded for each project, and it got to be extremely time-consuming," says Micah. "Too many fixtures only worked for one project. We wanted to be more efficient and flexible," he says.

Modular expertise makes the difference

It was a problem Todd had seen dozens of times, and he knew Bluco could solve it. So he visited Hostetler for a hands-on demo. It was a different process than the group had ever experienced. "We saw other vendors and it was a lot of 'here's our tools, just figure out what you need and call us,'" recalls Micah. "Plus the ideas they presented weren't even close to cost effective." Bluco's in-person demo allowed the team to fixture and weld one of their trusses on their own shop floor. They also tested a compatible FARO laser projection system. Seeing how laser outlines could guide component placement helped the team envision a future where efficiency was increased even further.

An open house seals the deal

While Micah's team was impressed, Hostetler doesn't take investment decisions lightly. "We basically check into every company out there. Interview them and make sure the ownership group is confident that

TOP: Stop bars hold the edges of the truss square, and spacers (blue arrow) allow adjustment for any pitch.

ABOVE: Micah's team welds a part fixtured in Bluco's mobile demo unit.

INSET CIRCLE: FARO projection laser makes it easy to locate components by outlining the right holes in green laser.

THE RESULTS:

Fixture adjusts to any truss size

Adjustable stops compensate for weld shrinkage

Ability to add camber to setup so trusses set straight

Working Together Drives Bigger, Better Results



Parts held straight and true, fixtures adjust to accommodate any truss



Conversion to wire welding (MIG) from traditional stick welding for cleaner welds

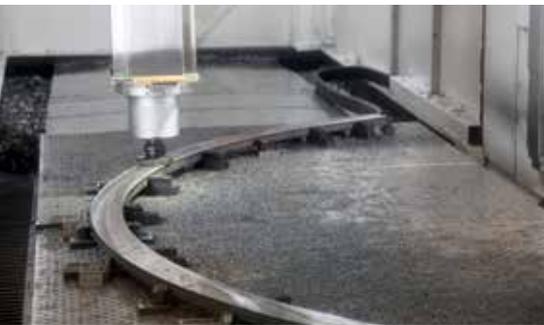


Weld booms keep cords off the floor for improved safety & convenience



Laser projection systems eliminate fixturing errors

For more information, call **800.535.0135**, email sales@bluco.com or visit bluco.com



TOP: A custom curved rail allows the fixture to be adjusted along a 180° curve to hold any truss.

ABOVE: The rail was conceptualized and manufactured on-site at Bluco's full-service facility.

ON EFFICIENCY:

"SOME OF OUR SETUPS WOULD HAVE TAKEN UP TO TWO DAYS. WE'VE CUT THAT TIME IN HALF IN SOME CASES."

ON QUALITY:

"THERE'S JUST NOT A LOT OF ROOM FOR ERROR ... WE'RE NOT USING MEASURING TAPES ANYMORE. WE'RE JUST COPYING THE DRAWINGS OUT OF SOLIDWORKS."

- MICAH SWARTZENTRUBER

we selected the correct partner. We're always looking for partners that can walk with us for many years versus who's the cheapest today." As part of that process, the team visited Bluco during an open house that featured Bluco's industry partners — Fronius, Andersen, FARO and many more. "That really helped us make the final decision on both Bluco and Andersen," he says. "That trip was well worth it."

Making it Better

Once Micah's team decided to go ahead with a modular solution, Bluco's engineers worked with them to design a single solution to handle every joist, rafter and truss that they built.

After installation, it was clear that the fixed anchoring of the table legs was limiting the fixture's efficiency. Immediately, Todd and his team set back to work, and came up with a first-of-its-kind fix: a curved floor rail. Custom manufactured on-site at Bluco, the rail allowed them to instantly adjust the table's position to fit an infinite variety of part sizes. "It works like crazy," says Micah. "We can do different pitches, legs, and everything on that. It makes for fast set up too, because we can anchor to a specific hole and just go right up to it."

For Bluco, fine-tuning is an important part of the process. "It wasn't perfect at first," says Todd. "We came back and made it better. It's what we do, and it's why we want to be on-site with every customer."

Production time reduced by 25%

The final solution brought a dramatic improvement in efficiency. "Some of the setups would have taken up to two days. We've cut the time in half for some of those larger setups," says Micah. Every fixture is saved

For more information, call [800.535.0135](tel:800.535.0135), email sales@bluco.com or visit bluco.com



TOP: The upgraded shop now includes Bluco modular fixturing, Andersen Weld Booms, and Fronius MIG welders.

ABOVE: Example of a finished barn structure built with Hostetler's signature trusses.

ON EASE OF USE:

"IT TOOK ABOUT A MONTH OF PRODUCTION BEFORE WE GOT REALLY COMFORTABLE. WHEREAS IN THE PAST THE TRAINING PERIOD WOULD HAVE BEEN A YEAR, SO IT'S JUST AMAZING ON THAT SIDE ... WE HAVE GUYS THAT HAVE NEVER DONE SET UP GO OUT AND THEY CAN DO A FIXTURE IN A VERY SHORT TIME."

- MICAH SWARTZENTRUBER

as a STEP file in Solidworks. Moving a component to fixture a new part is as easy as counting holes on the modular base to match the drawing. "There's days when we do five different barns, and there was a ton of setup the old way. This is much more efficient."

Final part quality gets a boost

In addition, the system holds each part straighter and truer, and ensures the tabs welded to each post and truss are precisely located every time. As a result, roof boards can be cut to nominal lengths without layout or measuring. Outer steel panels, roof sheets, and internal finishing now fit together flawlessly. "If you match hole to hole and spacer to spacer — there's just not a lot of room for error," says Micah.

Learning curve goes from one year to one month

The team also found it easy to learn how to use the modular system. "It took about a month of production before we got really comfortable, whereas in the past the training period would have been a year, so it's just amazing on that side" says Micah. "Now, there's way less of management's help and time needed out on the shop floor because we have guys that have never done set up go out, and they can do a fixture in a very short time. It's just a tremendous benefit."

Room to grow

What's next for Hostetler? "Eventually, we'll need a duplicate solution, so we can set up one fixture while the other is in operation," says Micah. He's also considering FARO laser projection as a future upgrade. In the meantime, they've added additional tooling to accommodate new product lines. "Overall, we saw the potential benefits of this solution before we even got it," he says. "And it's really taken us where we wanted to go." ■