



A Cut Above: Upgrade Your FABRICATING EQUIPMENT

With the economy being like it is, the do-it-yourself philosophy is more popular now with racers, and that's leading many of them to new fabricating equipment, noted Kevin Smith, Irvan-Smith, Concord, North Carolina. "A lot more people are doing it themselves, which is good for people who sell fabricating equipment because people need it," he said.

For the racers with the DIY method, high efficiency at a reasonable price is what they continuously look for when they purchase fabricating equipment. "Race fabrication is changing as all manufacturing is changing—cost increases necessitates efficiency improvements," noted Dave Gawronski at Unijig in Reedsburg, Wisconsin.

Gawronski added, "Manufacturing technology has trickled down to the grassroots builder. More people can afford to take advantage of CNC and other types of equipment that make more accurate, easier-to-reproduce parts."

"By listening carefully to the racing industry, bending and fabricating machines have become much more efficient, easy to use, and cost effective," agreed Kim Stevens of CML USA (Ercolina) in Davenport, Iowa. "Today's fabricating machines help provide performance-added value to products, while minimizing cost and headaches."

Curtis Van Der Wal, Van Sant Enterprises, Pella, Iowa, added that like almost anything in racing, the fabrication of race cars evolves at a fast rate. "Today's builders and fabricators realize

that their end customer is more discerning about the finished product," he explained. "With this in mind, these builders and fabricators are constantly looking for ways to improve their finished product. To do this, tools and machines are constantly evolving to allow the chassis builder and fabricator to build better, more consistent product, using less material in less time. Many car builders that we work with are moving to CNC and programmable tube benders as well as CNC tube notchers."

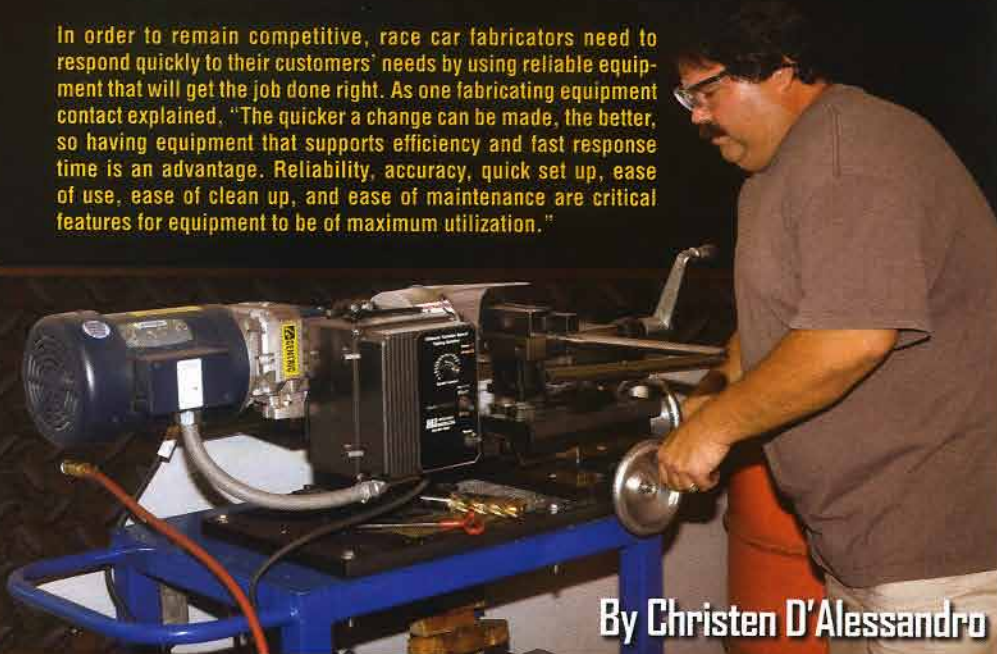
Trends In Fabricating

Jim McKenzie of JMR Manufacturing in Creston, Georgia, said the fabricating market is changing in a couple different ways. "I've seen a lot of smaller teams going to build more stuff in-house to have cost savings and a little more control, time wise, over what they're doing," he explained. "But on the other side of the spectrum I think we've seen a lot of the higher end stuff go to more specialized fabrication tools, not doing it with the build-it-yourself type tools anymore, but they're going more into a production more than the one at a time that it has always been in the past."

"Just as in all other areas, people are looking to be more productive—they want to do more with less so they're looking at how equipment can help them accomplish the best job in a minimal amount of time," added Mike Mittler, Mittler Brothers, Wright City, Missouri. "The lead times on jobs have shrunk, people are waiting until the end to spend money so then when they do decide to spend money they want to get their car built

Fabricating equipment has improved to be more accurate, efficient, and easy to use. With so many benefits available on the latest equipment, upgrading may prove very cost effective.

In order to remain competitive, race car fabricators need to respond quickly to their customers' needs by using reliable equipment that will get the job done right. As one fabricating equipment contact explained, "The quicker a change can be made, the better, so having equipment that supports efficiency and fast response time is an advantage. Reliability, accuracy, quick set up, ease of use, ease of clean up, and ease of maintenance are critical features for equipment to be of maximum utilization."



By Christen D'Alessandro

or modified or whatever it is in minimal time so then the shop says, 'How can I get this work done in a faster manner with less man hours?' Well, better equipment will help them accomplish that."

Paul Beha, HE&M Saw, Pryor, Oklahoma, agreed. "Race car fabrication, like the rest of society, is increasingly finding that the ability for 'fast response' is critical to remain competitive," he said.

machines—high quality bends, limited setup times and simplified part layout.

Another concern for fabricating equipment manufacturers such as Van Sant is the influx of poorly made offshore products, which not only hurts the American economy but also is more costly in the big picture for the end user. "We see far too many high-quality US made tools and machines that are being knocked

"Manufacturing technology has trickled down to the grassroots builder."

"The quicker a change can be made, the better, so having equipment that supports efficiency and fast response time is an advantage. Reliability, accuracy, quick set up, ease of use, ease of clean up, and ease of maintenance are critical features for equipment to be of maximum utilization."

Stevens from CML USA also noted that fabricators are placing even more value on the benefits of mandrel bending

off as cheap import tools, and the worst part about this scenario is that the end user does not always know the difference between the two," Van Der Wal of Van Sant said. "This can become dangerous as there is often a large difference in finished product that these machines and tools are able to produce.

"We talk to customers all the time who are buying their second machine or tool," Van Der Wal continued. "They originally

A Cut Above: Upgrade Your FABRICATING EQUIPMENT

bought the cheap version and it didn't work right, broke, or produced bad results. Then they end up spending good money after bad at that point."

Smith added, "We're American and we're hurting so we need to keep this American-made stuff going as best as we can and keep jobs at home, so to speak."

Necessities

In order for race car builders and fabricators to keep their shop current and functional, there are certain fabrication necessities that they need to have in their shops.

Blair Equipment Company in Flint, Michigan, focuses on hole-making tools for fabrication. The company offers precision tools that make holes faster and cleaner, according to Greg Londrigan. "The tools cut holes three times faster and last 10 times longer than traditional twist drills or hole saws," he noted.

Three cutter kits from Blair Equipment are products that every race shop, mechanic, or fabricator should have in their toolbox, Londrigan added. "The first two are Rotabroach cutter kits, which contain the most popular size cutters for holes from 5/16 inches to 1 1/2 inches in diameter. They can be used in hand held drills or drill presses. Our third must-have product is our Holcutter Kit, which contains the most popular cutters for large diameter holes."

Mike Hill of US Industrial Tool Company (the Southwest North American distributor for Eckold Tools, Tennsmith, and Sykes-Pickavant), in Gardena, California, also advised that in order to run a fabrication or race car building shop, you need to obtain a "bench brake, English wheel, shrinker stretcher machine, slip roll, notcher, snips, shot bag, and hammers."

Tube benders, tube notchers, cold saws or band saws, belt grinders, iron



Both race teams and race car fabricators who are looking to be more productive are seeking equipment that allows them to do more in less time. One manufacturer said that as lead times on jobs have shrunk, people are waiting until the end to spend money. As a result, when they do decide to spend money they want their cars built or modified in a minimal amount of time. This provokes the fabricator to ask, "How can I get this work done in a faster manner with less man hours?" The answer, he said, is with better fabricating equipment that is on the market today.

worker, hydraulic presses and drill presses are also all necessary pieces of equipment for a full time race car chassis builder, Van Der Wal suggested. "In addition to those items, most race car builders also need a sheet metal shear and sheet metal brake.

"If custom metal shaping is part of their fabrication, then an English wheel, planishing hammer, or power hammer is necessary, as well," he continued. "There are many small tools that are also needed, such as angle finders, tube rotation tracking devices and even bending software. All these products save time and material for the builder or fabricator."

Besides a welding machine, first and foremost fabricators need a tube bender and tube notcher, JMR's McKenzie said. Other necessary items, which are very often overlooked, are the belt grinding equipment. "Second to that, I think a lot

of the people are starting to progress toward things like the frame fixturing systems because it has come to a point where people are starting to realize that if you start off with a straight, flat, even, measurable platform, it's a lot easier to build accurately than to keep having to guess," he added.

Simply stated, "The builder should have equipment that will help him do his job in an efficient and a quality manner," Mittler said. But the most important necessity is a tube bender, but not just any tube bender, a high-quality one that's made to do race car type bending. "You can't use a low quality pipe bender because it will not give satisfactory results.

"Quality hand tools are the other things a guy has to have, and again we emphasize to look at it as an investment," Mittler continued. "Don't look at it as, 'I'll go buy the cheapest thing I can buy.' Buy a quality tool because even in the short

run it's going to pay off for you."

Smith added that fabricators simply need sheet metal brakes, shears, bead rollers, tubing benders, hole punches, and tin snipes, to get started. "You can do a lot with those tools. You don't have to have a shop full of different tools to do the work, you just have to have the right tools," he said.

"With our Unijig Pro chassis jig and a handful of shop tools that many race teams may already own, you can build your own winning race vehicle," Gawronski noted. "Our Unijig chassis fabrication equipment makes documentation and the possibility of repeating a chassis design accurate and cost effective."

Stevens offered, "The essential combination is an Ercolina rotary draw bender and a tube notcher-grinder for accurately coping tube to angles allowing fabricators to expand their design concepts while increasing manufacturing abilities."

A Cut Above: Upgrade Your FABRICATING EQUIPMENT

Purchasing Advice

A number of our contacts suggest that purchasing fabricating equipment from a reliable company that will offer technical support even after the purchase is a good idea for solid return on investment. "When you go to spend your money with somebody, I think you should stay with a reputable company," said Smith, who has been in this business for about 28 years. "I think people should pay attention to where they're spending their dollars and spend them wisely."

"Purchase your equipment from a manufacturer of bending machinery like CML USA, who offers skilled and trained factory support for their products," Stevens suggested. "Business can be tough so seek people who can support your product and ideas.

"Tools are investments and buyers need to research machines and manufacturers for quality. A great piece of equipment requires a manufacturer who will support their products after the sale. Purchasing decisions should not be based strictly on cost—consider how equipment can improve your current project results and create future revenue," Stevens continued.

In addition, buyers should always consider machine accuracy and dependability. "The fabrication process is complex. No one needs the additional aggravation of a difficult or unreliable machine. Ercolina machines are well known for their reliability and repeatability," Stevens added.

Stevens also advised not to buy an undersized machine to produce oversized results. "While price is always an issue, this is the single largest mistake some fabricators make. Carefully examine a potential machine's capacity and duty cycle."

At Van Sant, they talk with their customers to focus on what the customer's overall complete needs are. "When we have a good idea of their big picture, then we can look at each piece of equipment individually and make the right decisions about what equipment will fit their specific needs," Van Der Wal explained.

Van Sant also has various equipment

financing options available for its customers and will customize a plan to fit the customers' exact needs.

James Newberg of Baileigh Industrial in Manitowoc, Wisconsin, suggested that when purchasing big-ticket items, look for suppliers with lease options. "This will mean that the equipment is top quality because lease companies will not deal with suppliers of inferior equipment," he said.

"Also, call them and talk to them, if you get an answering service when you call to purchase, how do you think the call will go when or if something fails on the machine?" Newberg added.

Get The Goods

The product from Baileigh Industrial that has made the biggest splash in the motor-sports industry is its RDB-050, according to Newberg. "This machine seems to have revolutionized the 'home' race shop segment of the market. It allows the 'home' racer to get all the quality, accuracy, and capacity of the rest of our tube bender line, but get it to a price that everybody can justify," he explained.

The line of Utility Band Saws from HE&M Saw are ideal for the race shop environment, Beha noted, because they are extremely small and portable. "Our three smallest models operate on 110 volts, can saw metals up to six inches in diameter, and will saw anything from mild steel to chromoly tube or stainless steel straight and accurate, whether making 90 degree cuts or cutting angles up to 60 degrees," he said. "This alleviates the need to perform additional trimming or grinding for a good fit. These saws cut dry so there is no need for messy and polluting cutting fluids."

New at US Industrial Tool Company is Ekold's metal multi-former called the MF500. This tool can be used as an English wheel, an air planishing hammer, and a shrinker stretcher, Hill stated. Ekold also offers its popular KF170WCC, which is an air-powered metal forming machine that is quickly becoming the tool preferred by many fabrication shops, he said.

The top sellers from Irvan-Smith are bead rollers and small sheet metal brakes



“because those are the two main tools that fabricators need to do the job,” Smith said. “With the bead rollers you put your beads in your panels, which adds strength to it so your panel is strong enough to last. And with the sheet metal brakes you’re able to bend and form your panels, whether it’s interior panels, duct work, or body parts, you’re able to bend them and fabricate them yourself instead

pleasing and a lot faster for the welder to do than having kind of a rough joint that he needs to fit together,” explained McKenzie, who built off-road race cars for over 21 years so now, as a manufacturer, he “knows what characteristics you need to have in a fabrication tool.”

Ercolina’s TM76 mandrel bending machine with capacity to three inches stainless tube is ideal for bending round



When shopping for new fabricating equipment, our contacts advised having a thorough discussion with the manufacturer of the equipment to determine exactly your shop or team’s fabricating needs. While price is a major concern, also examine a potential machine’s capacity and duty cycle that can deliver what your shop needs now, and in the future.

of paying for somebody else’s labor.”

At the PRI Trade Show last December, JMR Manufacturing introduced its brand new bender and has sold a considerable amount of them since then. “Our new bender has features to control rotation and length stops and does very accurate repeat bends,” McKenzie explained. “We also have some new tube notching tools that are set up more for production and we actually have many new products coming out throughout the entire year.”

Also new for JMR is its frame fixturing table that makes it easier to be more accurate, which in turn makes the process faster, according to McKenzie. The table is modular and can be made from a two-foot square table to a 10- by 20-foot table, and you can continually add to it. It also breaks down and folds up to get it out of the way and create more space when needed.

JMR’s most popular products are its tube notching and tube bending equipment “because of the speed and how fast it aids in building a car.” Also profitable are JMR’s belt sanders. “It has taken people a while to realize if you use our belt grinding equipment to prepare the weld joint, it makes the welding not only stronger but also a lot more aesthetically

and rectangle tube chassis, stainless exhaust systems, and turbo components, Stevens noted.

One of Van Sant’s newest products is its line of sheet metal radius brakes. “We updated the design and brought them back to the market late last year,” Van Der Wal said. Van Sant’s Trick Tools Radius Brakes are available in six-foot and eight-foot versions, and each length comes with five different size radiuses.

The lineup of StrongHand BuildPro Welding Tables is another innovative item from Van Sant. “They are one of the most adaptable welding and fixturing tables on the market today,” Van Der Wal explained. “The BuildPro Tables are great for single component fixturing, up to entire chassis jig work.”

Mittler Brothers has a brand new bead roller that it made specifically at the customers’ requests. “We made a new bead roller with four inches of opening in the throat area as opposed to one inch, so it’s a significant change,” Mittler explained. “With the new machine, fabricators can have up to a four-inch flange on their material and still bead roll it without a problem, so this allows the fabricator and the builder more flexibility in it’s design and still be able to bead roll the panel.”

