

Thunder Cycle Designs: Creativity Made With Mazak

Eddie Trotta's life has taken some strange curves over the years, not the least of which was going from a rock star wannabe to bar owner and then custom motorcycle builder.

Trotta, owner and president of Thunder Cycle Designs (Ft. Lauderdale, FL) built his first shovelhead chopper at age 16 while working at East Coast Choppers (New Haven, CT). He has owned Thoroughbred racehorses (winning more than 100 races) and built and raced as throttleman for his own Rampage offshore racing team, capturing numerous world championships, including the Bacardi Cup. He's also participated and won on the Discovery Channel's "Biker Build-Off."

"I started off in motorcycle design and build as a hobby," says Trotta. "I've always loved motorcycles, and I've been a motorcycle maniac since I was 12 years old. My first job was working at a Harley shop, really the only job I ever had. But in my early years I started out wanting to be a musician, actually a rock star. I ended up attending the Music College of Boston, and then one year I came to Florida on spring break, went to a horse track and never returned, but that's another story. I quickly found that becoming a rock star was not an easy or fast road. I had more success at the racetrack. But life threw me a curve and I contracted cancer that caused me to slow down a little. In the process, I spent time rebuilding my Harley and bought a bar. While I was in New York City one day, I went to the Harley Davidson Café, designed around Harley Davidson motorcycles. With this in mind, I decided to open my bar with a motorcycle theme, too."

Trotta kept redesigning a bike he had bought, putting it on display in the Fort Lauderdale, FL, bar he called Thunder Road Saloon. A well-known motorcycle magazine, American Iron, put the bike on the cover. Now his friends began saying, "Well big shot, if you're so good, make your own bike."

"It was kind of a dare," added Trotta. So he bought several frames, motors, transmissions, and other parts and produced two bikes. These made the cover of another magazine, Easy Rider. "Now my friends started asking me to build them bikes. So I decided to start a small business building special bikes at night in a small shop. I asked a friend, John Jolly, who worked at a local motorcycle shop and was a Mazak machine tool operator, if he would help me build bikes at night. The bikes turned out nice, and we won some awards with the designs. We built others, and I bought a CNC machine tool to allow us to customize the bikes more and moved to a bigger place."

At this point, Trotta didn't want to keep two businesses, so he sold the bar and took part of its name for his bike business, Thunder Cycle. To develop the parts he needed for his motorcycles, he had been outsourcing them to companies using Mazak machine tools. When his part and motorcycle distributors started ordering components more consistently, he knew he could make parts more economically in-house. His friend and machine operator, Jolly, was sold on Mazak machines for reliability and ease of programming after using them for many years working in an aircraft plant.

"Other machines I looked at were weak and not very well-constructed," said Trotta. "Operators at the job shops I used for part production all spoke highly of Mazak machines. So three years ago, we purchased two Mazak machines, a Super Quick Turn turning center and a VTC-200B vertical machining center from Premier Machinery, the local Mazak distributor. The Mazaks really provided a capability and reliability we didn't get from our first CNC machine. They increased the production capability of parts for our distributors and availability for our own store."

Jolly added about the Mazaks, “The Mazatrol conversational programming system is so easy to learn, it just makes sense. It’s like talking to the machine. It prompts you through material selection. On the turning center, it asks diameter, length, cut depth and so on. It’s so easy compared to other machines I’ve operated.”

Parts that Trotta produces are primarily made from aluminum, such as handle grips, belt shrouds, license plate holders, mirrors, carburetor stacks, and pulley covers along with many frame and engine parts. However, some are produced in stainless steel. Once parts are machined, they go through either chrome plating or polishing to produce a mirror-like finish. Most parts are no bigger than a 16” cube with many being much smaller.

“This business is starting to see copies from Asia coming into this market,” said Trotta. “It’s also true for transmissions and engines. For my parts I’m looking at more productive machines. That’s why I turned to Mazak again and purchased two new machines. One, a Nexus QTN-200MY CNC turning center with milling capability, will let me completely cut many parts on it, saving me unloading and reloading to a second machine for finishing the intricate designs we produce in many of our parts. With this equipment, I can lower my price and compete with the Asian imports as well as other aftermarket suppliers. With a higher-performance machine, my parts will be smoother and require less hand-polishing, and consequently my chrome plating source is more likely to provide a better chrome-plated part. Almost all of our parts are very high-shine chrome.”

Mazak’s Nexus VCN-510C vertical machining center is the other machine that will give Trotta much higher output on prismatic type parts such as covers with logos. Trotta said it will give them twice the output of their Mazak VTC. “This increased productivity will help me meet my distributor’s demands,” he adds. “I’ve watched my business change from 20% parts and accessories and 80% motorcycle sales to 80%

parts and 20% bike sales. But this reflects an increase in actual bike units sold. Profit margin for parts is greater than for motorcycles, so my business generates more profit now than it did before.”

Though the vast majority of Trotta’s part sales are through distributors, some of these parts, such as belt shrouds, specially shaped grips, unique foot pegs and small oval mirrors, are sold in the thousands right from his store. Knowing what is selling well at his store, Trotta informs his distributors while pushing them to make sales.

To get their name in front of customers, Trotta attends bike shows, competitions, rallies, and other motorcycle events. “My bikes have won several design competitions and that’s how our company and my products have become known in bike circles. One year I rode a newly designed bike out to Sturgis, SD, a very big Harley rally, I didn’t even clean it off and left a few business cards hoping that I might get a new bike sale out of it. I was not well-known out there. When I came back to pick up my bike that evening, someone said, ‘Are you sticking around? You’re going to get a trophy.’ I said, ‘I have enough fifth-place trophies.’ He said, ‘No man, you won first place.’ So that was a big jump for me and my bikes.”

To stay on top, Trotta needs to come up with a unique chopper design every year. “There’s a lot of art in this business,” he said. “As a matter of fact the town had an art show at the art museum as a fund raiser for a local charity. They had all my bikes on display and called it “The Artistry of Eddie Trotta.” It was pretty cool and very flattering.”

Trotta, who has just occupied a new 32,000 sq. ft. building in 2005, credits his Mazak machine tools for providing the design freedom to produce unique parts. For custom choppers, unique, personalized parts are what they’re all about. “With the Mazak equipment, I could machine in special designs and features like special cylinder-head cooling fins, unique handlebar grips, mirrors and other parts.” Sounds like a bike any rock star would love.



Eddie Trotta on a custom Thunder Cycle design in his new 32,000-sq.-ft. facility.



Thunder Cycle Design's new building, Ft. Lauderdale, FL.



The higher tolerance cuts and improved surface finishes from his Mazak equipment result in better chrome plating on his parts, Trotta says.



Completing his own parts helps Trotta supply his store with the most popular options while keeping prices in line against competitors.