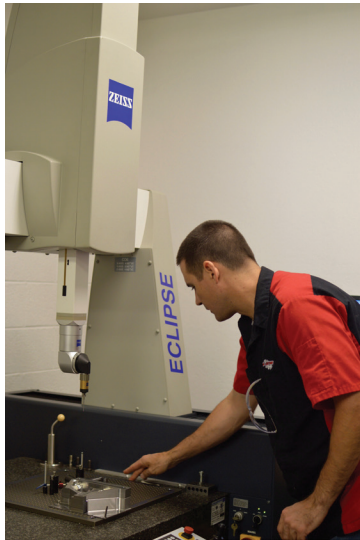




Certifies To ISO 9001 : 2015 / AS9100 Rev D With The Help of Consulting Firm BMSC



“I personally spent more than 18 months working with gear suppliers from all over the country on a Honeywell program for NASA. Out of the many suppliers I had the pleasure of working with, Ayers Gear by far outperformed all other gear suppliers we had for this program. Their quality and on-time delivery was exceptional. Because of this program and the level of quality Honeywell received from Ayers, I highly recommend this shop.” **Honeywell Senior Product Design and Engineering Team Member**

This customer thank you letter says it all. Ayers Gear is a superior gear-making manufacturer, but they are so much more. They are also a precision machine shop, offering 5-axis machining.

Owners Keith and Lance Ayers learned the craft of gear making from their father Larry, who founded the company more than 30 years ago. Within a decade, the 2 sons joined their father in the business, right out of high school. Today, Larry is retired, enjoying the climate in Payson, Arizona, but he didn't leave until he had mentored his 2 sons in the business.

There are a number of reasons why Ayers Gear is so successful, too many to mention in an article. But calling out some of their most significant differentiators is warranted.



• **Equipment** - They invest in some of the latest and best technology available to afford their customers superior products that are the end result of continuous improvement. In addition to their 3 5 axis-machining centers, the company recently upgraded their capabilities in the gear-making world, with the purchase of the Mitsubishi SE25A CNC gear shaping machine. The Mitsubishi SE25A can dry shape gears up to 1800 strokes per minute. With 250mm part diameter and 4.23DP capability the machine can support even the most varied gear demands. They also own the Fellows CNC Gear Shaper, which is manufactured in Rockford, Illinois. Their inspection center was recently upgraded, with the purchase of the Zeiss Eclipse CNC CMM. Today, with such advanced gear shaper equipment, Ayers can manufacture gears to AGMA 12, and they are seeing 7-10 times productivity improvements versus mechanical gear making equipment.

Not Just Gear Making - Gear making is indeed a specialty, and it takes a sophisticated machinist to learn the trade. Ayers has such difficulty finding new employees with



this talent that they make a practice of bringing in young machinists who then are training in gear making by the owners. They can manufacture a gear from print to assembly, with tolerances at up to .0003. And what is better than a gear making company that does more than this? They cannot only weld (tig and laser), but they are also expert in CNC machining, including 5 axis machining. Keith says, “Our business in machining has grown so substantially that today gear making makes up about half our business, and machining makes up the other half.”

- **Software and IT** - Ayers not only purchases the machine tools to improve their capabilities, they also invest in software and IT. Lance says, “All machinists are equipped with tablets, and the small computers have the necessary travelers, pictures of good parts, and even YouTube videos showing machine simulations.” Keith added, “For a small shop, our extensive use of an ERP system to run the business is a pleasant surprise to our customers.”
- **QuickTurn Capabilities** - Matt says, “Most customers who have come to us tell us that they are given schedules of 6 or more weeks for normal CNC shaping. At Ayers, we can typically turn our customers’ products in 5-10 business days.”
- **Referrals** - Both Lance and Keith say, “We’re really good at making parts, but we aren’t as good at sales and marketing. When asked how they acquired their 100 plus customers, who come from all over the US, the two said it was almost exclusively word-of-mouth that secured Ayer’s new customers. Matt elaborated, “I’ve been in the manufacturing industry for 23 years now, working at manufacturing companies that varied in size. I have never heard so many calls come into a company with the person saying “So and so told me I needed to call you for help on this part.” Matt says it was important to him to come to a company where he respected the owners and could be proud of the quality of products that came out of the shop.
- **ISO 9001: 2015 / AS9100 Rev D Certification** - Lance and Keith have long had a plan to certify to ISO

and AS9100, but they say they delayed it because they anticipated it would be too time consuming for a small business such as theirs. When they hired Matt Stevens more than a year ago, they raised the priority for certification. Matt worked for one of Ayer's long-term customers, so he knew the Ayers owners well. Matt wanted to get out of a larger shop where he was general manager, and into a company where he could be more hands on. Matt had spearheaded ISO/AS9100 certification with 2 of his prior employers, and he knew what to expect. He also knew the benefits certification would afford Ayers Gear. Lance and Keith half kid when they say, "Matt is the 3rd brother we were always looking for."

Lance says, "We received recommendations on Bretta Kelly, owner of BMSC, from both a customer and another shop. We also read about BMSC's success each issue in the A2Z Manufacturing magazine, so we made the decision to use BMSC to prepare for certification."

Ayers Gear contracted with BMSC in February of this year, and they certified to both ISO 9001: 2105 and AS 9100 Revision D officially on May 4th, a remarkable timeline of less than 4 months! Not only did they successfully certify, they certified with '0' findings, another astounding feat!

Lance and Keith agree that they couldn't have gone through the certifications as quickly and successfully as they did without the expert help of Bretta Kelly and her associate Debbie Hart. Keith says, "I was anxious about the investment required for certification and the level of work we would have to exert to achieve it. Bretta and Debbie continued to boost my confidence — not only are they so knowledgeable but they are also extremely supportive." Lance says, "They weren't the least bit surprised that our Audit was so successful that we had '0' findings."

Matt says, "Certification is something our customers would ultimately require from us, so necessarily it allows us to retain our loyal customers and add new customers." He added, "It's more than that though — it has improved our level of organization within the company and our communication." Keith added, "We are



COMMERCIAL GEAR MANUFACTURING & CNC MACHINING ISO 9001 : 2015 / AS9100 REV D CERTIFIED



Mitsubishi SE25A CNC Gear
Shaping Machine



HAAS 5 Axis-Machining
Centers



Zeiss Eclipse CNC CMM



Quick Turn Precision Gears and
Machined Parts

Phone: 623-934-6913 • www.AyersGear.com

Engineering: Engineering@ayersgear.com • Sales: Keith@ayersgear.com
General Information: Info@ayersgear.com • Quotes: Quotes@ayersgear.com

documenting processes better since we embarked upon the certification process. When you receive an order for a difficult part that you struggle with before getting it right, if you don't document the process for success, and get the order again months later, you will go through the same cumbersome learning process all over again."

Every company scraps some parts; it's just the nature of the business. Though Ayers Gear's inspection process means that the occasional rejected part was caught internally, never reaching the customer, scrapped parts still are a cost to the business and can mean delays to the end customer. Lance says, "The processes we've further established with ISO 9001 and AS9100 have resulted in lower scrap rates."

I highly encourage you to contact Ayers Gear if you haven't used them for gear making in the past. Once they demonstrate their skills, you will likely expand your relationship with them for your 5 axis machining needs. Contact them at 623-934-6913 or visit AyersGear.com

To find out how Bretta Kelly, owner of BMSC, can assist you in certifying to ISO/AS9100, as she has with more than 100 clients, call 602-445-9400 or visit businessmsc.com.