



KCS SAYS MATSUURA PALLET CHANGERS CHANGED EVERYTHING

KCS was hustling to stay on top of a heavy workflow comprised mainly of highly-complex prototype work for the automotive & aerospace industries, including NASA-commissioned parts for the Artemis space program. KCS's existing 5-axis machines, including two Hurco models & a Bridgeport, were taxed to the limit, largely due to the outsized amount of time dedicated to setup. With one operator running two machines, the shop had reached a limit of 16 hours of machining time per day.

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OVERVIEW

Located in Livonia, Michigan, KCS is a low-volume, high-mix machine shop specializing in the precision machining of built-to-spec products for a range of industries that include space hardware, manned spaceflight, motorsports, automotive and aftermarket, consumer products, and industrial robotics. With a focus on utilizing the latest technology, hardware, and software, KCS specializes in sophisticated, complex, challenging, multi-axis machining projects.



"What the automation allows us to do-it's a force multiplier. One machine is a force, now two machines is a force multiplier, but three machines-one of them having a pallet pool. is an exponential force multiplier. That's a machine that doesn't require a full shift of an individual and can run unattended nights and weekends. It's all about the spindle uptime,"

-KCS founder and president, Kyle Szczypienski

CHALLENGES

- KCS identified new opportunities in high-volume production & required the flexibility to shift into low-to-medium production quickly, even for complex parts.
- It was crucial for KCS to run unattended through the night and weekends to keep up with demand.
- KCS faced the everyday challenges of labor and skills gaps.
- Accuracy of <5 microns was vital for the complex components KCS produced.
- Requiring the ability to pull a job in that hadn't ran in months and get the same part off the machine, part repeatability was key for KCS.



Scan the QR code to learn more.

ACCURACY

"It's not just about part accuracy-it's also about the point of rotation accuracy. We have a lot of data here that the Matsuuras are able to hold that point of rotation, less than 5 microns, throughout the day time and time again. What that correlates to is part repeatability- that that first piece and the last piece are coming off the machine the same. And with all the capacity of the pallet pool here, we have the ability to pull a job in that hasn't been ran in months and get the same part off the machine the first time as it was the last time," Szczypienski said.



"KCS has a long history of being a high-mix/low-volume, built to spec, 5-axis job shop. We identified some new opportunities in a high-volume production and faced with the everyday challenges of labor and skills gaps and cost of ownership, we decided that the MAM72-35V Vertical Machining Center is the most efficient and most sensible point of entry into on a high-volume market as well as very well suited for our everyday niche high-mix low-volume 5-axis machining designed to run 24/7 for 20 years. The efficiencies can't be beaten," Szczypienski explained.



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You Never Stop Paying with the Less Expensive Machine

"I always say that with the less expensive machines you never stop paying. They have a lower price tag, but I feel like the cost of ownership is higher due to maintenance, longer setups or having to cater to the machine throughout the process. We decided to go with Matsuura because the accuracy, reliability, and robustness of the machines would allow us to reduce our setup times," Szczypienski said.