

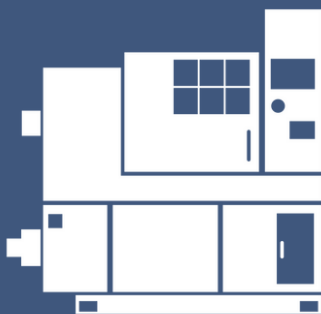
Issue 8 August 2020



DETROIT ROBOTICS
COMPLEXITY. AUTOMATED.

VORSPRUNG DURCH TECHNIK

"GERMAN TECHNOLOGY SUCKS"
SAID NO-ONE EVER



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Vorsprung Durch Technik

Progress Through Technology

In the UK, throughout the 90's, Britain was the 3rd largest global market for Audi, outselling every premium German automotive brand, even BMW and Mercedes.

Controversially, Audi's UK brand slogan "Vorsprung Durch Technik" was in German. Even in advertising, this was a risky idea when less than 1% of the British population speak German.

Nevertheless Audi's brand slogan became a national catchphrase, even though hardly anyone had a clue what it actually meant.

It actually translates as: *Progress through technology.*

What the Brits thought it meant was: *German technology is superior.*



Audi
Vorsprung durch Technik

Buying leading-edge machining tech is a lot like shopping for high end cars.

Firstly, at the high end, they're all really darn good. But, as we all know, Germans are sticklers for precision. They're only happy when everything functions exactly as it should. This applies to both build and service.

Second, although all the high-end brands (cars and machining tech) tick multiple boxes (e.g., performance, design, capabilities) some are better than others depending on the application.

As Detroit Robotics are focused on complex aerospace and medical applications we chose the German 5-Axis brand those industries favor: Hermle.



At Detroit Robotics, when we purchase equipment, we commit.

We follow a time-tested plan for redundancy and capacity called Noah's Ark.

In other words, we buy at least two of everything, usually more. So, we choose carefully.

We also consider service and support as much as the capabilities themselves.



Vorsprung Durch Technik

Hermle count over 30,000 active 5-Axis cells on shop floors worldwide.

Although some brands have higher market recognition, most have only been producing 5-Axis machining cells for 10+ years. Hermle have led the 5-Axis market for over 30 years.

The thinking, and it's served us and our customers well, is that consistency is a really great place to start when seamless rapid automation is the goal.

Aside from the build and service, Hermle's unique capabilities and automation integrations really stand out.

In terms of advanced finishes, especially for aerospace parts, Hermle's C-400 contouring accuracy and surface quality are second to none. The C-400 routinely handles tight tolerances up to 0.0001 (ten thousandth) on multiple axes with the CNC industry's smoothest machine kinetics.

This flexible machining "touch" lends itself well to unforgiving aero-grade materials like Titanium and Inconel.

For automation integrations, Hermle, unlike their counterparts, take things a step further. Whereas Makino and Okuma CNC cells use 3rd party integrations for scaled automation, Hermle integrate the whole kit and caboodle.

One system, one support team, one standard

When troubleshooting customized OE integrations, it's not uncommon for one OE to pass the buck to the other.

Problem? Blame the other OE.

Also, 3rd party integrations "don't remember." Hermle's intuitive system combines state-of-the-art 5-Axis machining with fully integrated pallet changers.

And it remembers. Everything!



Vorsprung Durch Technik

The integrated HS Flex pallet changer turbocharges high-mix low-volume complexity. Hermle's ACS (Automation Control System) runs a smart order management system and integrates fully with Siemens NX and PLM software (also German, and the state-of-the-art programming and PLM software.)

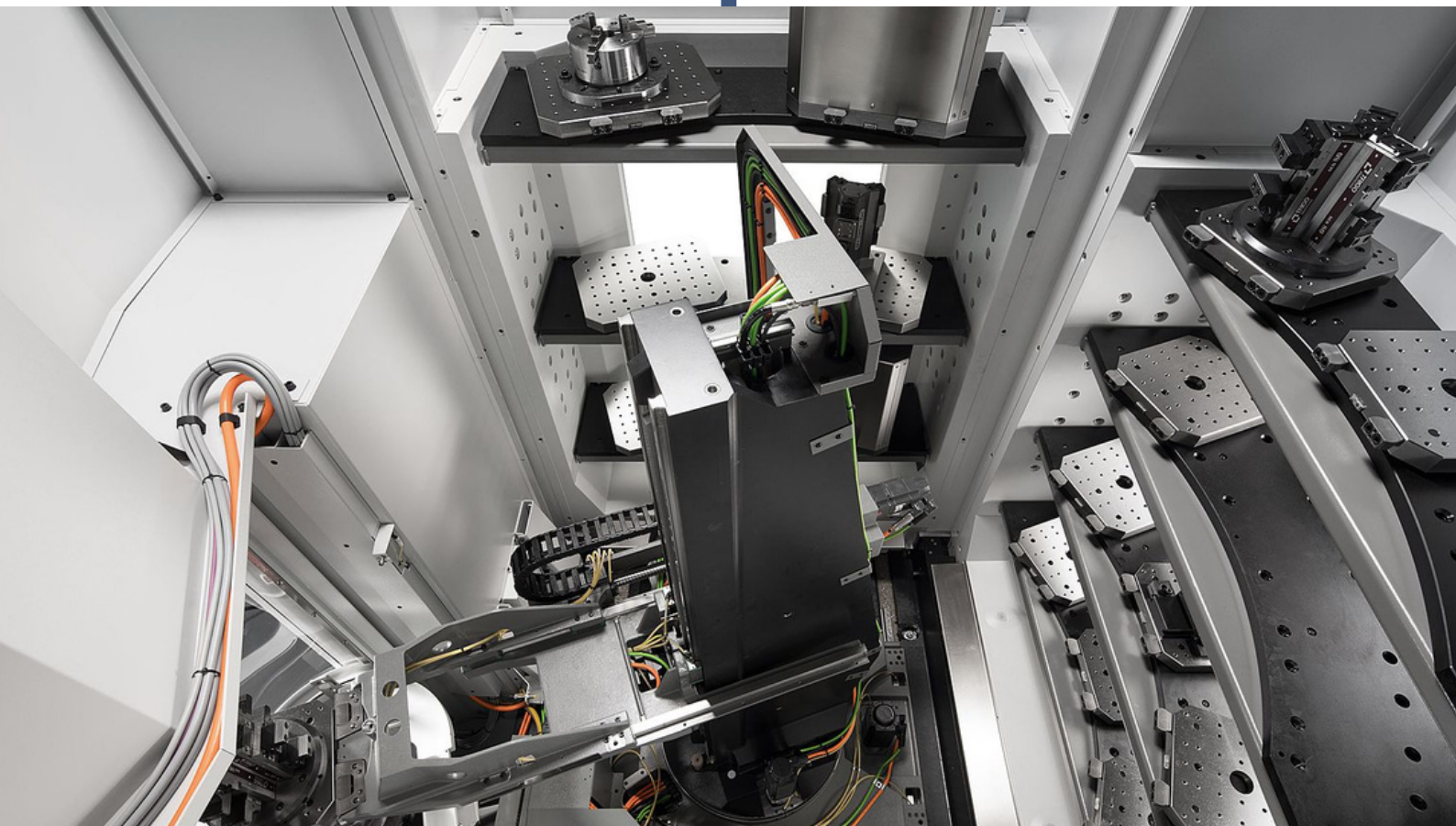
Machining setup is time-consuming and requires precise repeatability. The traditional manual setup process is subject to variables from one production run to another. The Hermle system self-adjusts for even micro changes in temperature or humidity and includes built in tool wear detection and auto-tool changes.

All the small things that can cause big delays are figured out and built in. Vorsprung Durch Technik!

Hermle's Flex system is entirely configurable, streamlines the entire setup process and auto-calibrates to the last precise setup using intuitive controls.

This ensures full conformity on repeat parts and significantly accelerates production cycle time by up to 50%. This gives us the flexibility needed to handle new parts at speed.

Furthermore, it solves the time-urgency challenges of prototype buyers who rarely have the time to plan.



THE TAKEAWAY

- Speed or accuracy is not a choice. Especially when you're German.
- Leading edge tech is great, until there's a problem. Then you have a high-tech headache. Just like our customers depend on us to go the extra mile, Detroit Robotics choose technology partners who do the same: solve problems quickly and never quit until everything is wunderbar!
- In any machine, automotive or automation, build quality precedes features. The Hermle is designed and built so well it more than justifies the almost double price tag of its 5-Axis competitors. And the features leave other 5-Axis cells in the dust.
- Our Hermle automation makes the same complex precision parts other machines do, except up to 50% faster, and almost always with more accuracy.
- So, with machining tech, like beer, sausages and, cars, buying German is always a sound choice.

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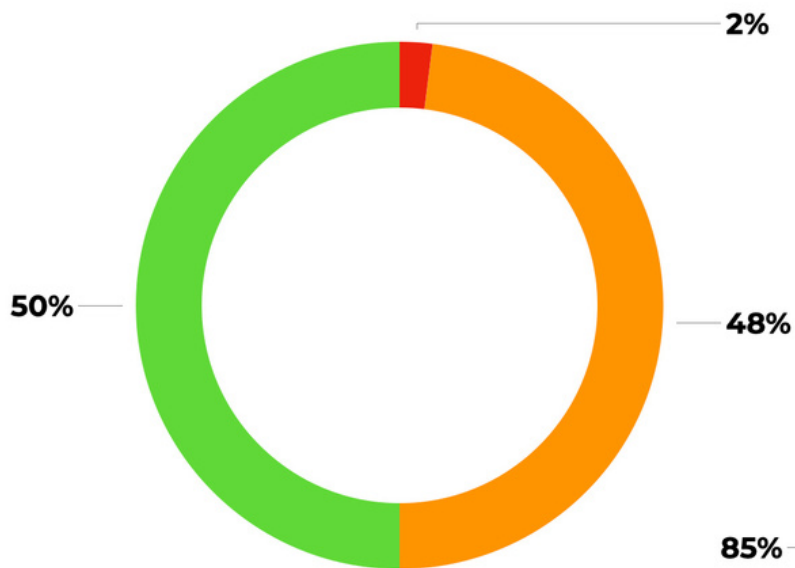
THE DATA

This graphic shows the difference in operational machining time between a fully-integrated 5-Axis cell vs. a 3rd party integration.

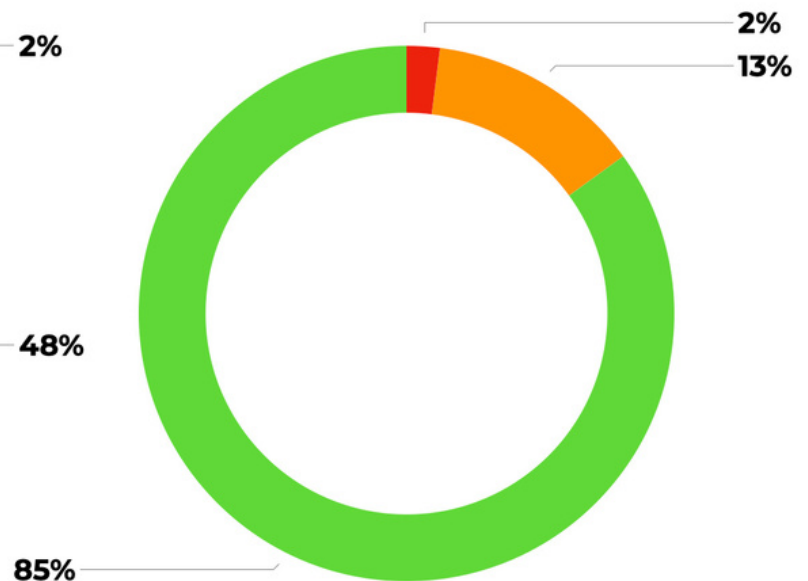
The Hermle integration has a significantly higher ratio of live machining time vs. ancillary (down) time.

This results in quicker setups, changeovers, and accelerated lead times.

3rd Party Integration



Hermle 5-Axis Integration



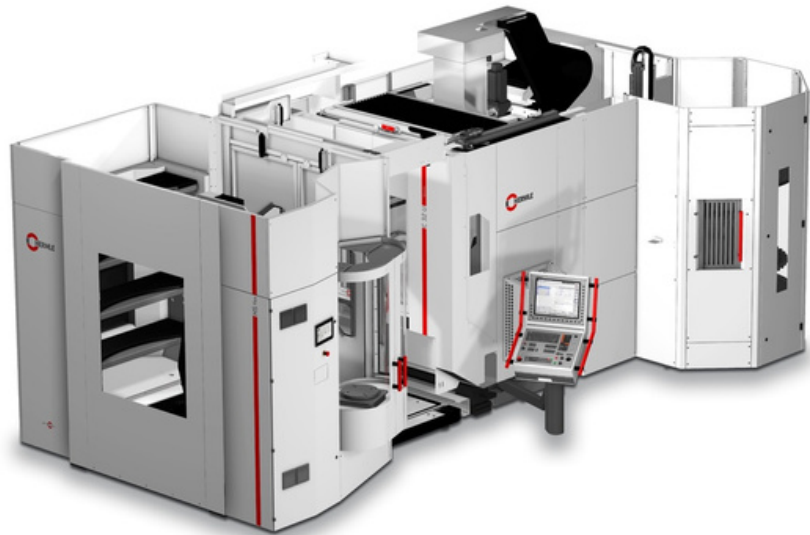
● **Maintenance** ● **Ancillary Time** ● **Operational Time**



THE TOOLS



Hermle C-400
5-Axis Machining Cell



Hermle HS Flex Automated
Pallet Changer

SIEMENS

Ingenuity for life



Siemens NX & PLM Software

[Download our complete equipment list here](#)