

# Watching the Wheels



Making precision carbide cutters for the aerospace industry means that Carbro Corp., Lawndale, CA, must be very responsive to large and small orders with very high quality, long-life cutting tools—mills, reamers, routers, countersinks, and more.

The 40-year-old, family-run firm has made its reputation on producing high quality tools used by companies like Boeing, Lockheed and Northrop to machine aluminum, stainless steel and honeycomb composite material. The shop runs more than 40 wheel packs across its 5 ANCA grinders, mounting whatever pack is needed by any of the machines to fill an order in the shortest possible time.

In most shops, that might get confusing and would be time-consuming.

For example, with grinding and dressing cycles, the diamond wheels used by an RX7 one month may not have precisely the same diameters, face angles, and radius weeks later when the GX7 is

assigned to produce more of the same tool.

The solution for Carbro is ANCA iCheck, a collaboration between ANCA and ZOLLER that measures grinding wheels and wheel packs, stores the actual wheel data, and transfers the data to the grinding machines.

The wheel dimensions are checked on the ZOLLER CNC measuring machine before use. If required, the wheels are dressed, and the wheel pack is checked again. That actual data is uploaded, ready to use to update tool programs in iGrind next time the tool is ordered. Anca iGrind takes these measurements and makes

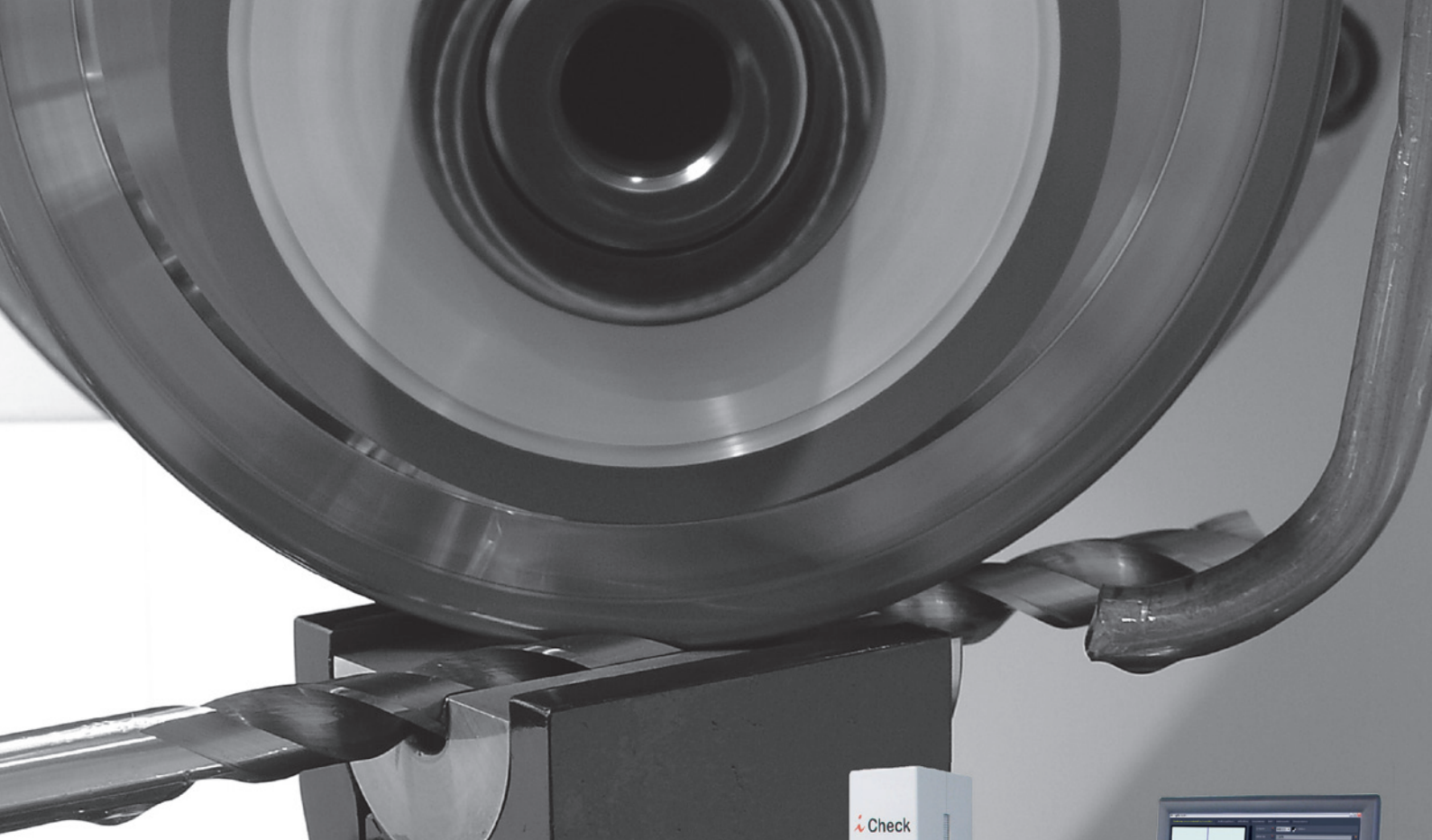
the necessary adjustments to produce the programmed tool. The combination of iGrind simulation software with the iCheck measuring machine lets Carbro work out part programs in full detail offline and ahead of time.

The ANCA machines at Carbro are networked to the computer storing the actual data, so when a tool is ordered, the machine downloads the actual wheel data for the pack to be used. That way, the first tool out of the machine is very close to specifications, according to Anders Plano, general manager.

“The iCheck has allowed us to reduce set-up time for each job up to 50%,” Anders said. “The precise and reliable measurement of the wheel packs off-line lets us respond much more quickly to the smaller order quantities we are seeing and to run on any of our ANCA’s any of our thousands of different part numbers. Customers get exactly what they need, when they need it.” **TSE**



Carbro Corp’s Anders Plano: “The iCheck has allowed us to reduce set-up time for each job by 50%.”



## »iCheck« Grinding Wheel Measuring Machine the ideal complement to all ANCA grinding machines

ZOLLER measuring machine »iCheck« for measuring and inspection from FEPA grinding wheels and grinding wheel arbor assemblies with wheel data transfer to ANCA Tool Grinding machine controller.

### Highlights:

- Automatic grinding wheel measuring procedures over measuring programs with predefined wheel shape templates.
- Micron precise and user independent measurement of FEPA grinding wheels.
- Output of grinding wheel geometry data in machine controller confirm format for fast and secure data exchange.



### Your benefits:

- Reduced machine setup time for increased profitability.
- No test runs required.
- Reduced tool measurement cycles during machine setup.
- No risk of damage from grinding wheels.
- Up to date production schedule.



**ZOLLER - Your expert for tool measuring and inspection.**

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