

Destination: Precision and Speed

Next-level productivity
in aerospace



ZEISS CMM Acceleration Mode for Aerospace Applications

Dedicated extension for ZEISS PRISMO 7/12/7 fortis

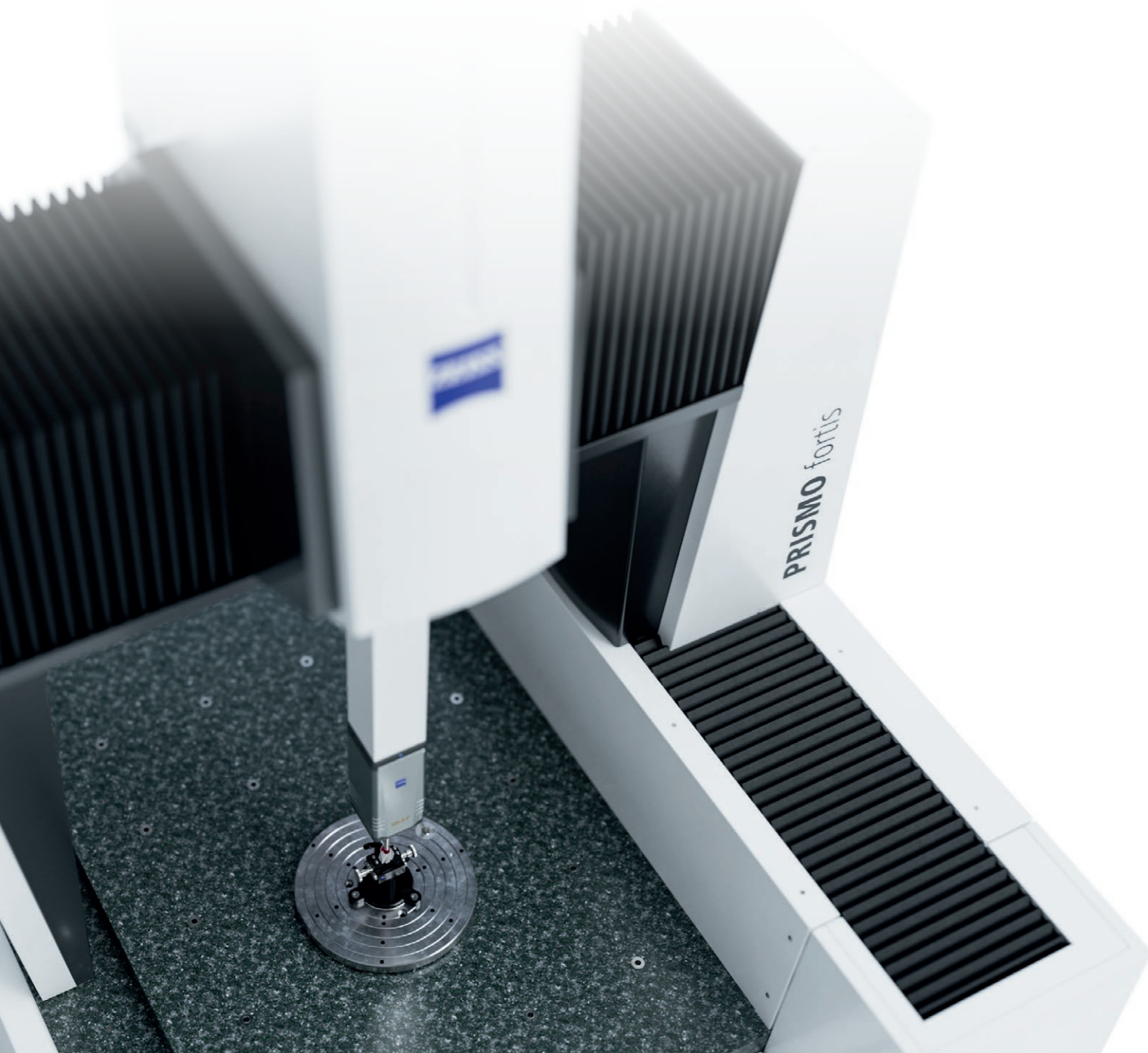
zeiss.com/prismo



Seeing beyond

Always on Point: ZEISS CMM Acceleration Mode for Aerospace Applications

Quality inspection of engine components like blades and blisks is vital. Yet it is also expensive and time-consuming, accounting for 20% of the total production cost and 25% of the total production time. Any means of speeding up the measurement process without compromising on accuracy promises significant savings for the sector at large – which is where ZEISS CMM Acceleration Mode for Aerospace Applications comes in.



Available for ZEISS PRISMO 7/12/7 fortis, ZEISS CMM Acceleration Mode for Aerospace Applications comprises a pair of options known as ZEISS VAST Rotary Table Axis (ZVRA) and ZEISS VAST Rotary Table (ZVR) as well as a dedicated application support package if required. ZVRA ensures accuracy by providing swift definition of the axis of the rotary table, while ZVR promotes faster movement of the rotary table and thus faster measurement.

Operating requirements include the active scanning head ZEISS VAST gold, the new ZEISS controller C99m, safety laser scanners, the rotary table RT-AB-600, and 315 mm or 400 mm face plates featuring a triple reference with 3 rolls. These new face plates harmonize the radial distances and the rotational pattern of the screw holes. ZEISS can also supply

dedicated clamping systems and a customized automated loading system to support high productivity and increased efficiency in the process.

ZEISS CMM Acceleration Mode for Aerospace Applications delivers game-changing results for the aerospace sector. ZVRA and ZVR cut the time required to measure blades and blisks by at least 50% and as much as 70% – all while achieving highly impressive data quality at such speeds. They also ensure repeatability and reproducibility within 10% of the measured tolerance of the blade and blisk inspection characteristics at maximum acceleration and maximum speed. And the dedicated application support package adds numerous customer-specific enhancements for extra productivity. Perfect for an industry that demands precision at pace.

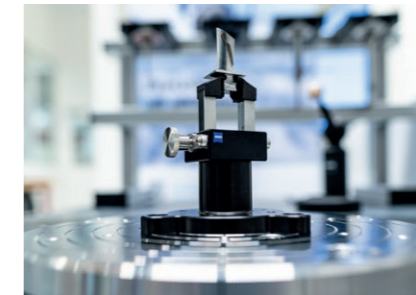
The three components of the ZEISS CMM Acceleration Mode package



ZEISS VAST Rotary Table Axis

ZEISS VAST Rotary Table Axis (ZVRA) defines the axis of the rotary table, providing an essential basis for accurate and reliable measurement. Where axis definition previously involved six single-point measurements, ZVRA performs one continuous movement in a fraction of the time.

What sets this new method apart is the fact that the sensor moves along a track at an even height, meaning that the process consists of a single smooth motion with no unnecessary travel. By offering considerable time savings, the ZVRA encourages more frequent definition of the rotary table axis and therefore ensures accuracy, safety, and productivity.



ZEISS VAST Rotary Table

ZEISS VAST Rotary Table (ZVR) enables faster movement of the rotary table, which in turn means faster measurement times. As workpieces are measured on different levels, the higher rotation speed supported by ZVR results in significant efficiency gains.

While angular speeds were formerly limited to 50%/s, ZVR achieves 220%/s if the moment of inertia is below 1 kg·m². ZVR works with the safety laser scanners, which automatically trigger a safety mode if a hazard is detected. The reduced speed ensures productive and responsible operation for as long as the issue persists. The standard speed is automatically enabled once the hazard is resolved.



Application Support

ZEISS CMM Acceleration Mode for Aerospace Applications includes a dedicated application support package for even more customized deployment if needed. Services include the adjustment of detection parameters and machine parameters, such as the acceleration ramp of the individual X, Y, Z, and RT axes. These parameters are therefore tailored to customer-specific measurement and application requirements based on specific geometrical and physical issues.

Maximum CMM productivity and performance is ensured via enhancements made to the machine and the inspection plan in accordance with tolerance specifications in the drawing. The targeted solutions featured in the application support package are also complemented by an optional software maintenance agreement offering extended coverage.

Your Benefits

- ✓ Blade and blisk measurement performed up to 70% faster
- ✓ Cuts measuring and setup time and slashes costs in essential area of quality inspection
- ✓ Easy preparation of measurement plan and processing of results in ZEISS CALYPSO
- ✓ Targeted application support included and ZEISS Software Maintenance Agreement available
- ✓ Automatic speed reduction mechanism for safety and productivity

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