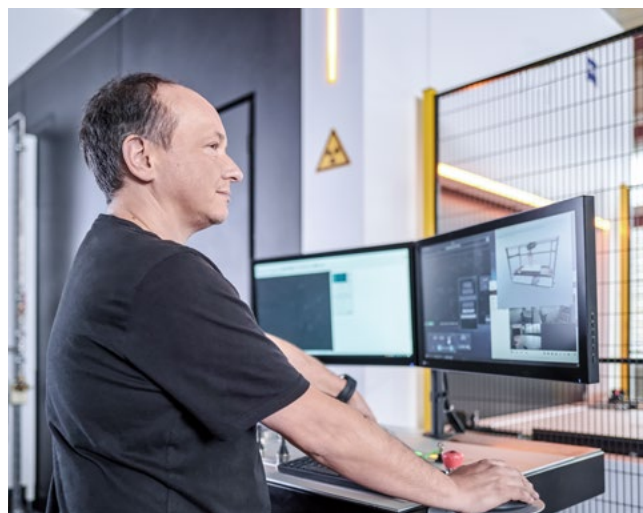


ZEISS OMNIA GC 220-180

Next-Gen Automated Inspection for Large Parts



Inspect large parts like the rear or front underbody

ZEISS OMNIA GC is built for the future of automotive manufacturing, where larger castings demand more advanced inspection solutions. With its high-quality X-ray technology and precision-engineered system, it can handle even the largest components – delivering sharp, detailed imaging without compromising speed or accuracy.

Its intelligent design provides full coverage in a single CNC program, reducing inspection time while maintaining high precision.

Outstanding inspection capacities with optimized efficiency, flexibility & reliability



Full flexibility for inspection of various parts

The multi-fixture design allows different parts to be inspected using the same pallet, while the internal pallet mover provides maximum flexibility in part handling. Effortless adaptation to diverse components without changing setups enhances efficiency and reduces downtime.



Maximized inspection area to footprint ratio

The monoblock design and cartesian mover principle achieve full inspection of large castings in minimal space. The shielded X-ray cabinet optimizes shopfloor use, while the internal pallet mover's shifting and tilting maximize the usable inspection area within the smallest possible footprint.



Outstanding ZEISS Service

ZEISS offers a whole host of excellent hardware and software services, keeping the maintenance requirement low while also providing swift support whenever needed.



Fast inspection cycle

The system delivers fast inspection cycles with precise cartesian movements and parallel loading/unloading for maximum efficiency. Unlike robotic solutions, it eliminates the need for safety reset positions, hence reducing delays.



Upgradable & customizable

The system's modular design allows smooth integration into existing production lines. Its adaptable architecture, e.g. single vs. double door, ensures future-proof scalability, enabling upgrades to meet evolving inspection needs.



Proven expertise & global support

Built on the best-in-class ZEISS BOSELLO OMNIA, ZEISS OMNIA GC benefits from decades of experience in casting inspection. With hundreds of systems installed worldwide and a global service network, customers receive fast and experienced support.



Single door or double door solutions for different requirements

ZEISS OMNIA GC can be configured as a single-door system for at-line or in-line inspection. With its compact footprint, it is ideal for sequential tasks with low to medium throughput while seamlessly integrating into existing production lines. Upgrading to a double-door system transforms it into a high-productivity in-line solution, enabling fast and automated part handling with parallel loading, unloading, and inspection of multiple pallets. This flexibility allows manufacturers to scale inspection based on production demands.



Regardless of whether the system is used at-line or in-line, it offers advanced Automatic Defect Recognition (ADR) for the automatic inspection and evaluation of defects such as porosities, inclusions or cracks in accordance with ASTM standards.



Cartesian axes for endless inspection angles

Our X-ray inspection system leverages high-precision cartesian manipulators to obtain images of all critical areas of a part. Unlike robotic solutions, which are restricted by rotational knuckles, Cartesian axes provide smooth, linear motion for precise tilting, zooming, and positioning. This allows the system to access even the most challenging areas of complex castings. With an X-ray beam offering an inspection tilt of $\pm 60^\circ$ and movement speeds of up to 15 meters per minute, ZEISS OMNIA GC ensures fast, flexible, and collision-free inspections from every possible angle.



Technical details

X-ray tube 160/225 kV, 800 W | 1800 W (millifocus)

Flat panel detector 8": 1024 × 1024 @ 200 μm pixel pitch
10": 1792 × 2176 @ 139 μm p. pitch
16": 2048 × 2048 @ 200 μm p. pitch

Inspection envelope 2200 × 1800 × 900 mm

Footprint Single door (conveyor included): 2870 × 8149 mm
double door (conveyor included): 2870 × 11302 mm

System weight 20 t

For further information, check out our website zeiss.ly/mpbc