# Versatile

ECO C.160
ECO C.225
ECO C.320
ECO C.450

- ✔ No frills concept and pure focus on the essentials
- ✔ Excellent cost benefit ratio for economic quality control
- ✔ Easy operation principle and low training requirements
- ✔ Ideal solution for manual and semi- automatic inspection tasks
- ✔ Full CNC capability for automated inspection sequences
- ✔ Easy movement on the shopfloor using forklift pockets
- ✔ Full VisiConsult image processing software suite available
- ✔ Inspection sequences and macros available
- ✔ Can be upgraded to Automatic Defect Recognition (ADR) and CT
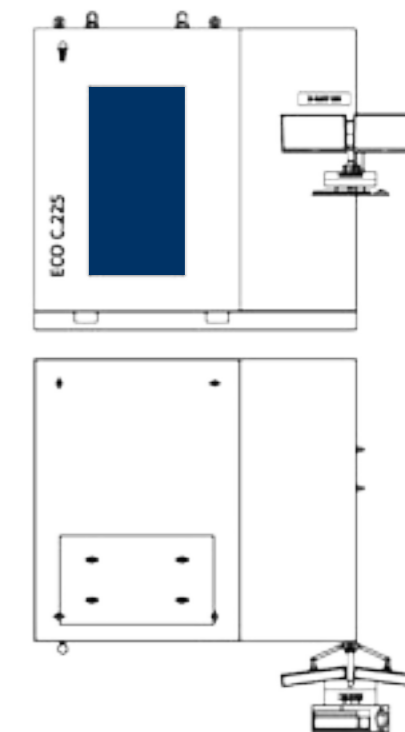
This universal X-ray inspection cabinet is equipped with a C-arm and a large inspection envelope, as well as full CNC capability for automated inspection sequences. As with all ECO line systems, the ECO C. has a favorable cost-benefit ratio due to its standardization, but the X-ray source and detectors are still configurable. An easy and fast installation is ensured due to the compact design that includes forklift pockets. As soon as the system arrives, the operator can start to inspect because the training requirements are low, and the software is user-friendly.

Flexible C-arm and large inspection envelope

|	ECO C.160	ECO C.225	ECO C.320	ECO C.450
Weight	8060 kg	8912 kg	13255 kg	19610 kg
Dimension	3000 x 2950 x 2500 mm		3050 x 2975 x 2525mm	3300 x 3025 x 2575 mm
Parts envelope	Ø 700 x 1200 mm			
Tilt axis	+-20°			
Lift axis	1200 mm			
Magnification	1.22 x-4.65 x			
Part weight	Max. 150 kg			
Energy	160 kV	225 kV	320 kV	450 kV

➤ Comprehensive image processing

- ✔ All ECO systems run with proven Xplus image processing and control software
- ✔ Includes a broad variety of image enhancement tools for unmatched clarity
- ✔ The VCxray LiveFilters ensure a realtime image enhancement similar to FLASH or HDR filters
- ✔ Easy annotation and overlay functionalities
- ✔ All software functions can be automated using inspection sequences and macros
- ✔ Multi language support

➤ Automated Defect Recognition (ADR)

- ✔ All ECO systems are ADR capable (Standard for ECO R.)
- ✔ Allows to detect defects like porosities
- ✔ Including an ADR offline programming toolbox
- ✔ Evaluation criteria like defect size , defects per area , distance between defects etc. can be defined

Automatic detection of defects through advanced image processing or Artificial Intelligence (AI) algorithms can offer significant savings. VisiConsult has over 25 years of experience in this field and has a comprehensive in-house developed ADR toolbox. It fulfills international quality standards like ASTM, as well as the demanding company standards in the automotive industry. Typical ADR applications include the detection of porosities, inclusions and cracks, as well as geometric measurements and feature recognition. It is possible to define specific ROIs to check many metrics like density, distance, size, occurrence per area and many more tools that can be dynamically defined. Training of the system does not require any programming skills and can be adapted by our customers.
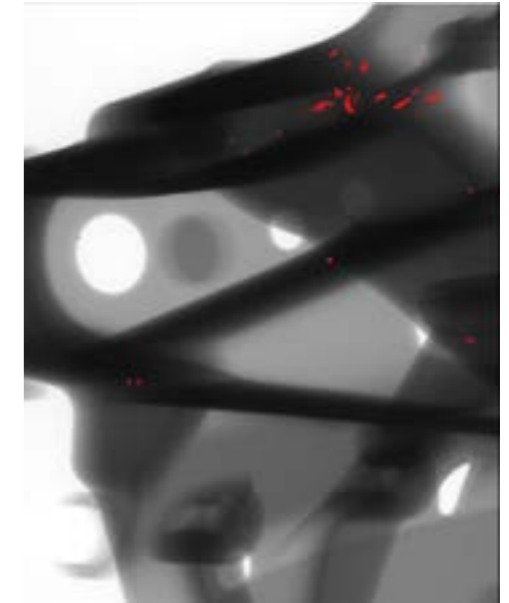
➤ Premium X-ray sources

The ECO line provides a broad range of premium X-ray modules designed for integration, matching your needs and specifications. From 160 to 450 kV and a focal spot of d = 0.4 mm. Standard modules come from VCxrays partner COMET and are manufactured in Switzerland.

➤ Excellent Detectors

	DDA0505J	DDA0909M	DDA1012M	DDA1717M	DDA1717HE
Active Area	130 x 130 mm	210 x 210 mm	250 x 301 mm	427 x 427 mm	426 x 426 mm
Pixel Pitch	85 µm	205 µm	100 µm	139 µm	100 µm
Frame Rate	20 (1x1) 40 (2x2)	30 (1x1) 60 (2x2)	10 (1x1) 20 (2x2)	6 (1x1) 12 (2x2) 18 (3x3)	10 (1x1) 20 (2x2) 30 (3x3)
Pixel Matrix	1536 x 1536	1024 x 1024	2496 x 3008	3072 x 3072	4260 x 4260
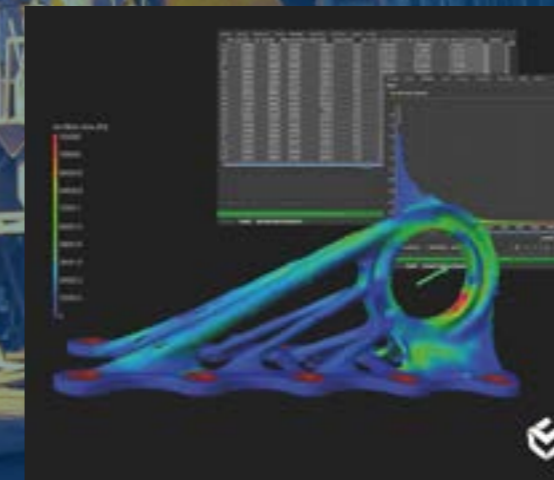
➤ Computed Tomography

- ✔ Dimensional Measurement and Reporting
- ✔ Assembly Verification and Visualization
- ✔ External and internal measurement
- ✔ Foam Analysis
- ✔ Defect Detection
- ✔ Fiber Flow Analysis
- ✔ Failure Analysis

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