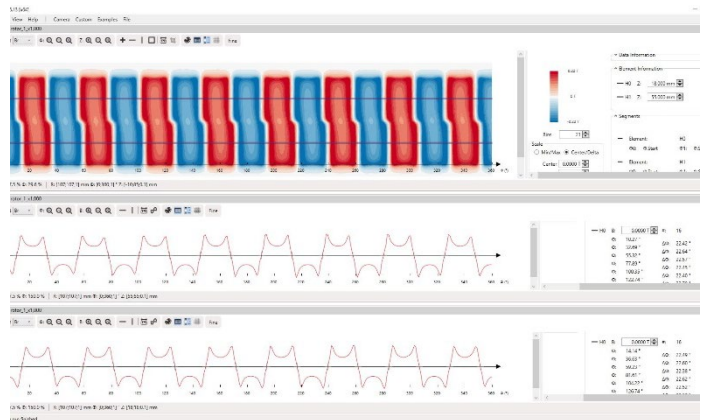
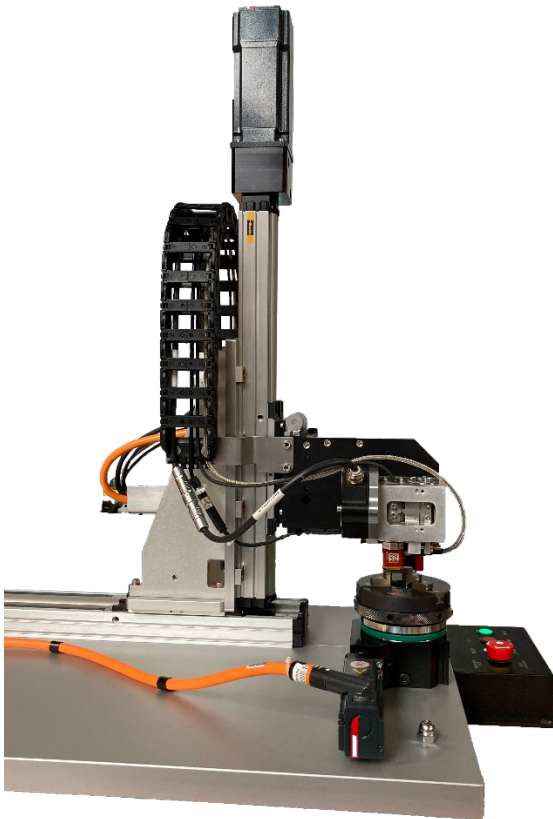


Axial Rotor Scanner

With MiniCube3D Camera

Magcam's Axial Rotor Scanner with 3D magnetic field camera provides quantitative 3D (Br,Bt,Ba) magnetic field scans using 16384 Hall sensors with 0.1mm spatial resolution measured in less than a second.

The measured magnetic fields are analyzed by Magcam's MagScope measurement & analysis software, which provide powerful analysis capabilities for a complete quality control and characterization of axial flux PM rotors and magnetic ring assemblies. MagScope is designed to extract as much information as possible from the measurement data.



Left: Magcam Axial Rotor Scanner.

Right: Automatically recorded and stitched magnetic field images of an axial PM rotor.

Features:

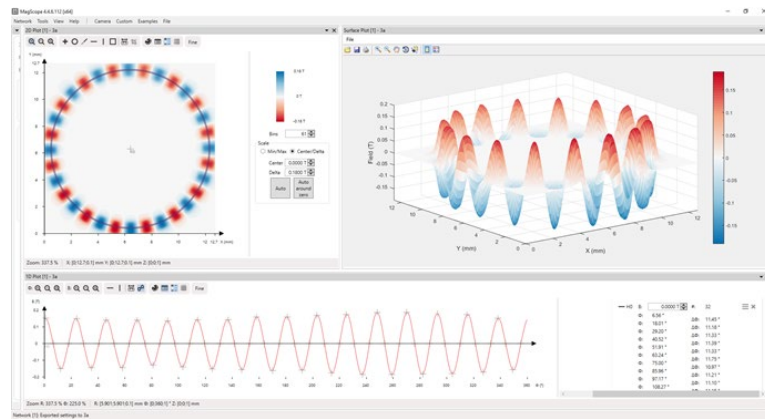
- Rotor scanner converted to axial scan mode
- Integrated laser sensor
- Ring outer diameter range : 0 – 300mm
- Ring height range: 0 – 200mm
- Integrated MiniCube3D or MiniCube1D magnetic field camera
- Repeatability of X and Z axes: 1.3 μ m
- Repeatability of angular axis (unidirectional): 0.2 arc-min
- Measurement range +/-1T
- Measurement resolution 100 μ T
- Automatic collision detection
- PLC controller
- Dimensions (LxDxH): 880mm x1110mm x 1740mm

Typical applications include:

- Axial permanent magnet (PM) flux rotors
- Multipole ring magnets
- MagSafe charger

Data analysis possibilities include:

- Automatic zero crossing detection
- Automatic pole count
- Automatic pole size measurement
- Pole height uniformity
- North-South pole symmetry
- Local magnetization / material defects
- Fourier analysis of harmonics, e.g. for noise analysis
- Analysis of radial, tangential and axial magnetic field components (with MiniCube3D camera)



*Left top: 2D plot of a 24-pole ring magnet. Right top: surface plot.
Bottom: 1D plot of a cross section on the 2D plot.*