

**AMPRIME Design** Software

AMPERES, a three-dimensional magnetostatic field solver from Integrated Engineering Software delivers superior design capabilities in one fully-integrated package. AMPERES greatly expands your design potential and allows you the ability to simulate and optimize electromagnetic components and systems before the manufacturing stage. This means significant cost savings, faster to market times and reduced prototype costs. AMPERES makes use of our innovative Boundary Element Method (BEM) technology, recognized as the most powerful and efficient approach for electromagnetic design and analysis.

Design engineers depend on AMPERES for the design and analysis of magnetic equipment and components, which incorporate linear, non-linear, and permanent magnet materials, including:

- magnetizing fixtures
- permanent magnet assemblies
- circuit breakers
- recording heads and reclosures
- electric (AC/DC) motors

- magnetic shielding
- cyclotrons, solenoids and transformers
- magnetic levitation and bearing systems
- sensors and magnetic instrumentation





3D shaded view of voice coil motor

#### Quick, Productive... you're up and running in no time

AMPERES maximizes productivity by allowing for the simulation of virtual prototypes on the computer. AMPERES significantly reduces design and prototype costs and provides engineers far greater insight into design optimization and verification.

"With AMPERES simple, yet powerful, user interface we generated meaningful models after a surprisingly short learning curve. AMPERES' intuitive output options helped guide us to optimal solutions. The bottom line for our business has been impressive time- and cost-savings for our new designs and, more importantly, a rapid response to our customers' needs."

David Scerbak President, Electro-Optics Technology, Inc. Traverse City, Michigan, USA



# amperes

## amperes at a glance

- 3D magnetostatic field solver for a diverse range of applications
- Powerful Windows<sup>®</sup> native toolbar interface for easy data and geometry manipulation
- A wide array of post processing options for design evaluation and verification
- Industry standard CAD import/export utilities offering time saving convenience for model design and creation
- Comprehensive technical support services from the best in the industry

#### As easy as one, two, three

AMPERES provides fast accurate results, exact modeling of boundaries and easy analysis of open region problems. No Finite Element Mesh (FEM) is required. AMPERES delivers a powerful, easy-to-use design and analysis tool right to your desktop.

AMPERES goes to work in just three easy steps.



Create your design through our geometric modeler or import from your CAD program.



Assign the physical attributes of the model.





Analyze the model, display the results and optimize for performance.

#### AMPERES' advanced technical features

- Intuitive and structured tool-bar interface maximizes productivity for experts and beginners
- Static and phasor analysis modes
- Simulation of non-linear and permanent magnet materials
- Simulation of lossy magnetic materials
- Force, torque, flux linkage and inductance calculation
- Periodic and symmetry features minimize modeling and solution time
- A variety of display forms for plotting scalar and vector field quantities including, graphs, contour plots, arrow plots, color maps and vector loci plots
- High quality graphics and text utility for preparation of reports and presentations
- Data exportable to formatted files for integration with spreadsheets and other software packages
- Batch function allows unattended solution of multiple files
- Powerful parametric feature allows definition of variable parameters to be stepped through allowing the analysis
  of multiple "what-if" scenarios and facilitating design optimization

### Try AMPERES for 30 days!

Discover how easy AMPERES is to learn and use. All full version software is available for a 30-day evaluation. Verify and compare the results. Call for an AMPERES evaluation and start improving productivity today.





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