

EnginSoft is a premier consulting firm in the field of Simulation Based Engineering Science (SBES) with a global presence. It was founded in 1984, but its founder and initial employees had been working in SBES since the mid '70s. Throughout its long history it has been at the forefront of technological innovation and remains a catalyst for change in the way SBES and CAE technologies in general are applied to solve even the most complex industrial problems with a high degree of reliability.

Today, EnginSoft is comprised of groups of highly qualified engineers, with expertise in a variety of engineering simulation technologies including FEM Analysis and CFD, working in synergic companies across the globe. We are present in Italy, France, Germany, the UK, Sweden, Turkey and the U.S.A. and have a close partnership with synergetic companies located in Greece, Spain, Israel, Portugal, Brazil, Japan and the U.S.A.

EnginSoft works across a broad range of industries that include the automotive, aerospace, defense, energy, civil engineering, consumer goods and biomechanics industries to help them get the most out of existing engineering simulation technologies.



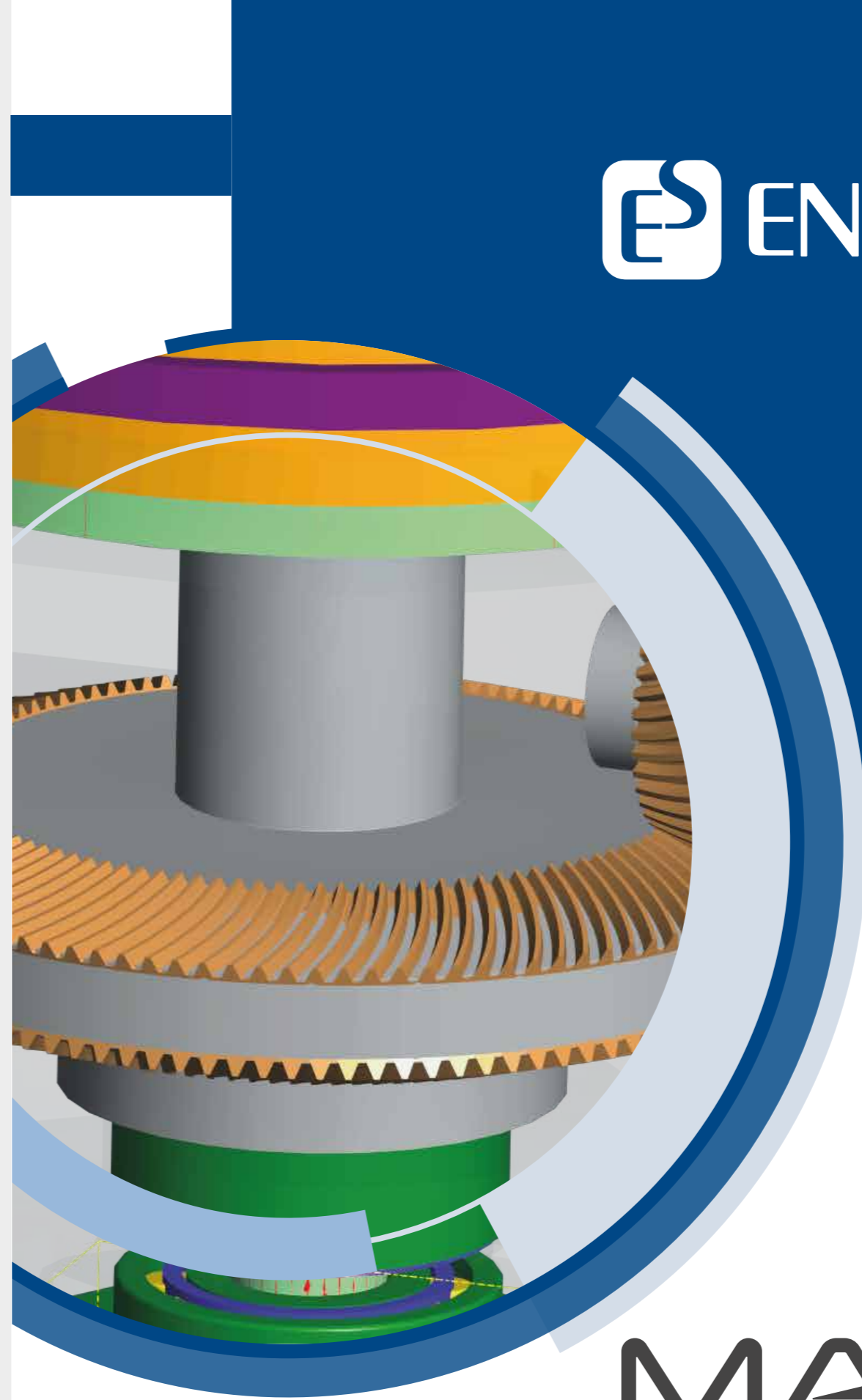
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+39 0461 915391
- FRANCE**
+39 0461 915391
- GERMANY**
+49 2234 60386 10
- UNITED KINGDOM**
+44 2476 9971 60
- NORDIC EUROPE**
+46 46 286 89 00
- TURKEY**
+90 216 504 11 53
- USA**
+1 469 912 0504



www.enginsoft.com | info@enginsoft.com



DATA SHEET



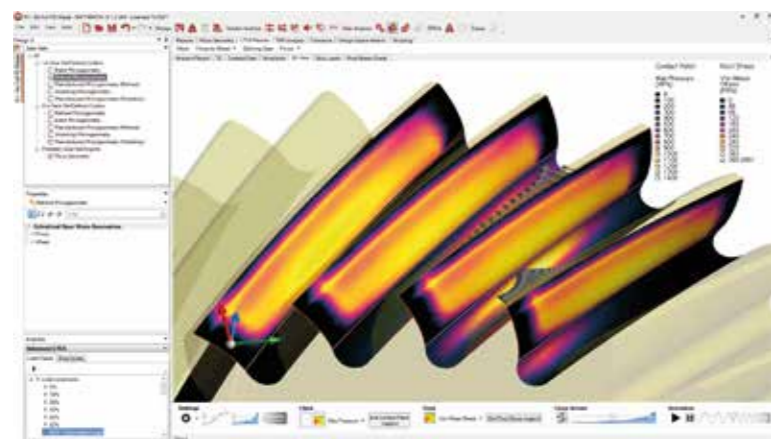
MASTA

Gear

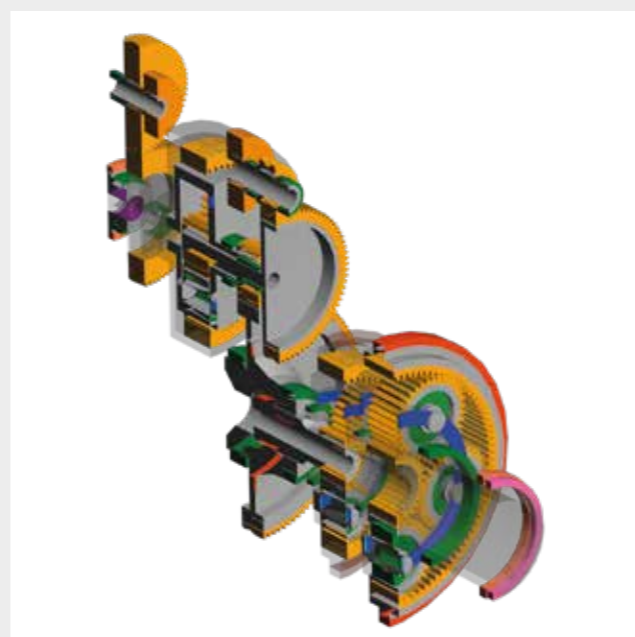
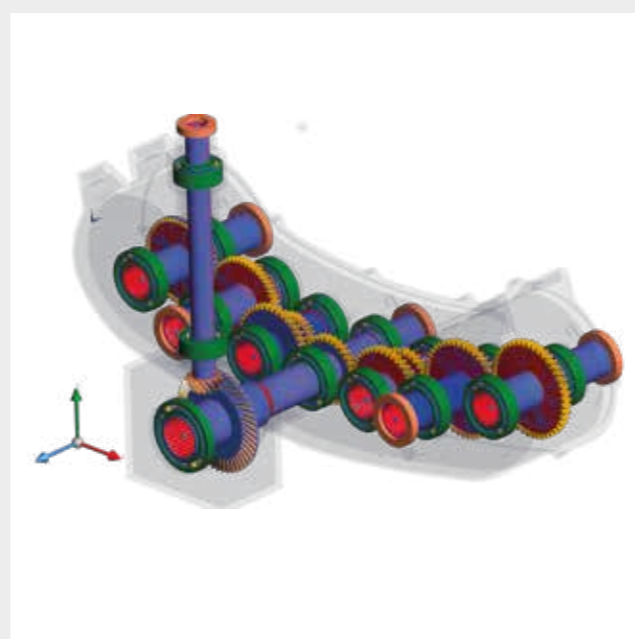
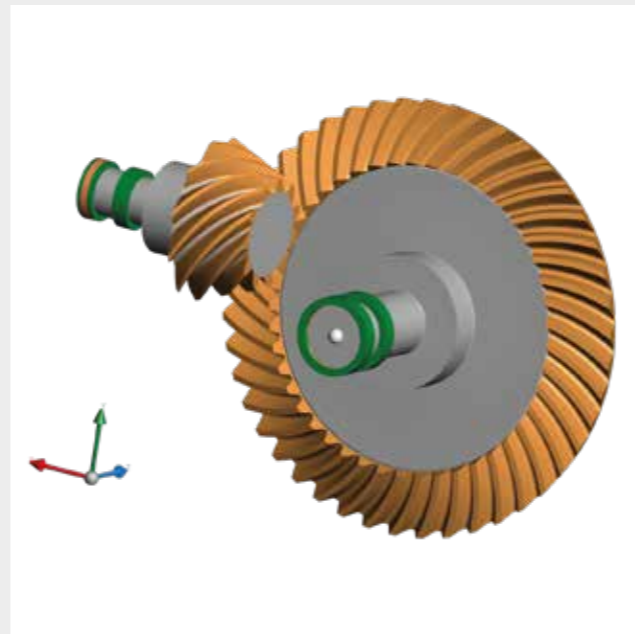
Gear design is an easy go in MASTA. All the features embedded drive the user during the whole design process, helping him when the road become too rough: this is the main target of MASTA software developers. So the user can develop effective gear macro geometry using powerful design, analysis and optimisation tools developed specifically for gears.

Again easy is to design gear micro geometry using an array of powerful design, analysis and optimisation tools. To help the design process and save prototype materials and re-working during testing phase, the designer can consider the complete system behaviour for effective and efficient micro geometry development.

Expert in bevel gears can take profit by linking MASTA with specialised software packages from world-leading bevel and hypoid design companies, so that to combine MASTA's full system model with their comprehensive design tools.



Masta is a product
SMT



Gear

Macro Geometry

- ✓ Ability to develop multiple designs for each gear set. Easily compare designs against one another.
- ✓ Combined design and analysis mode giving instant feedback of design changes on tooth shape, tooth contact and performance results against international standards.
- ✓ Perform automatic optimisation by specifying allowable design changes and results targets. Get a head start in optimising macro geometry designs.
- ✓ Utilise revolutionary DoE tools to assess thousands of potential gear designs with minimal user input, with access to simple and intuitive plotting tools.

Micro Geometry

- ✓ Utilise high fidelity LTCA (Loaded Tooth Contact Analysis) to determine critical design metrics such as contact patterns and transmission error.
- ✓ Choose from various levels of LTCA to balance simulation speed and accuracy. Streamline your micro geometry development process.
- ✓ Develop multiple micro geometry designs for each gear mesh and easily compare their performance.
- ✓ Combined design and analysis mode giving instant feedback of design changes on tooth contact pattern, transmission error, gear ratings and much more.
- ✓ Perform automatic optimisation by defining detailed design strategies and design limits. Developed well defined micro geometry specifications with minimal user input.
- ✓ Utilise revolutionary DoE tools to assess thousands of potential gear designs with minimal user input, with access to simple and intuitive plotting tools.

Bevels & Hypoids

- ✓ Import and export bevel and hypoid gear geometry to Gleason and Klingelberg software packages.
- ✓ Include critical system information such as gear mesh misalignment for informed bevel and hypoid optimisation.
- ✓ Model an array of non-parallel gear configurations within MASTA as part of the complete system model.

Cylindrical Gear Manufacturing

- ✓ Simulation and optimization of hobbing or shaping cutter cutting cylindrical gear profile and root
- ✓ Reproduction of the gear geometry and deviations, under the manufacturing conditions in the gear hobbing machining
- ✓ Optimising pre grinding hob or shaper profile.
- ✓ Calculate the plunge shaver parameters required to manufacture a specified cylindrical gear, Change them to investigate how resulting gear differs from the required gear as input.
- ✓ Simulation of shaving dynamics (also forces) to ensure consistent shaving quality throughout the life of the cutter (determine the life of the cutter and good quality gears)
- ✓ Optimising ease off; finishing machine settings and cutter data; roughing machine settings and cutter data; TCA and V-H check; CMM measurement data. Applicable only to Face Milled gears.