

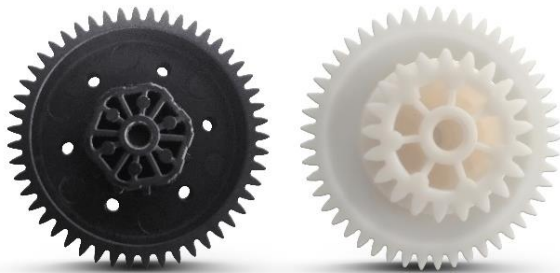
KISSsoft Engineering and Consulting

Engineering and consulting are important components of our range of services. We want to support our users in every phase of project development. By determining the best possible solutions and consulting with our experts, we can work together with our customers to ensure that the desired product is completed as efficiently and cost-effectively as possible.

KISSsoft Engineering Services

- Proven experience over decades
- Several hundred projects conducted

You have good reason to reach out to our company for assistance and consultancy on gear design, tooth geometry optimization, a second opinion, detailed life and strength rating or concept creation.



Example: Tooth form optimization for reduced vibration levels of plastic gears

The KISSsoft company has ample, as well as proven, experience in virtually all types of gearings and different systems like agricultural transmissions, wind turbine gearboxes, EV vehicle drivelines, plastic gears and planetary arrangements. Over the last decades, several hundred projects have been conducted by our engineers.

Designs, where we assisted our customers range from gears with a diameter less than 1mm to gearboxes with a power rating of more than 6MW. Due to our close collaboration with other Gleason entities, local and international universities and plastic material suppliers, we offer a unique set of skills.

Application Experience

- Engineers with application specific experience
- Holistic range of services



Example: Gear macro and micro geometry optimization for a mill drive

Our team of engineers with background and expert knowledge in bevel, planetary, worm, crossed axis helical, beveloid and face gears is happy to provide targeted services, e.g.:

- Design review of gearbox concepts, bearing selection, gear parameters
- Optimization of gear geometry to maximize life, strength and resistance
- Optimization of gear geometry to minimize vibration, wear and power losses
- Design of plastic gears for manufacturability, tolerances and power density
- Second opinion in case of damages, failures and disputes
- Generating rating reports for certification agencies
- Creation of KISSsys models for complex geared mechanisms or complete drive lines
- Literature and theory review to come up with best practices and specific know how

- Consulting on implementation of engineering analysis processes
- Design of gear modifications for optimal contact patterns under load
- Comparative strength assessment for use of existing transmissions or gearboxes in higher power applications
- Technology studies
- Test planning, witnessing and assessment
- For steel and plastic gears

Special Requirements

- Custom software solutions
- Know-how transfer within the project



Example: Rating of 3MW wind gearbox components for certification along GL guideline, test witnessing, contact pattern assessment

What is unique about our engineering services is our focus on best possible gear design for often contradicting requirements.

Our customers appreciate and respect our specific know-how for tuning gear sets to maximum performance. Combine our consultancy services with “training on the project” so that the know-how collected over decades is transferred to you.

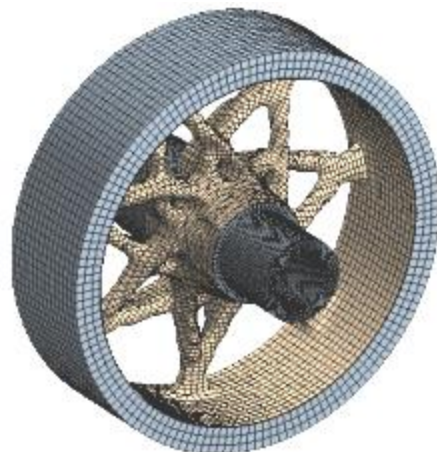
We respect your desire to outsource only parts of the total works and therefore typically offer very specific tasks focusing on gears, gear optimization, engineering analysis and conceptual design.

Engineering Analysis

- Network of experts for any field
- In-house tools and commercial CAE software

Through a network of experts and in-house tools, we offer the following types of engineering analysis:

- FEM of structural parts, e.g. planetary carriers or housings
- Rotor dynamics of single shafts and drive lines
- Detailed bearing load distribution with KISSsoft and in combination with FEM
- Testing of plastic and low torque gears in collaboration with local university
- Material verification of plastic gears with specialized university partner
- Kinematic and power loss models, tuning of engineering models to measurements and field results
- CAD works, custom software solutions, MBS
- 3D printing of prototype parts, measurement services with local partners
- Topology and parametric optimization



Example: Topology optimization of a gear body for a gas turbine reduction gearbox

Contact us through info@KISSsoft.com for an in-depth discussion of your specific needs.