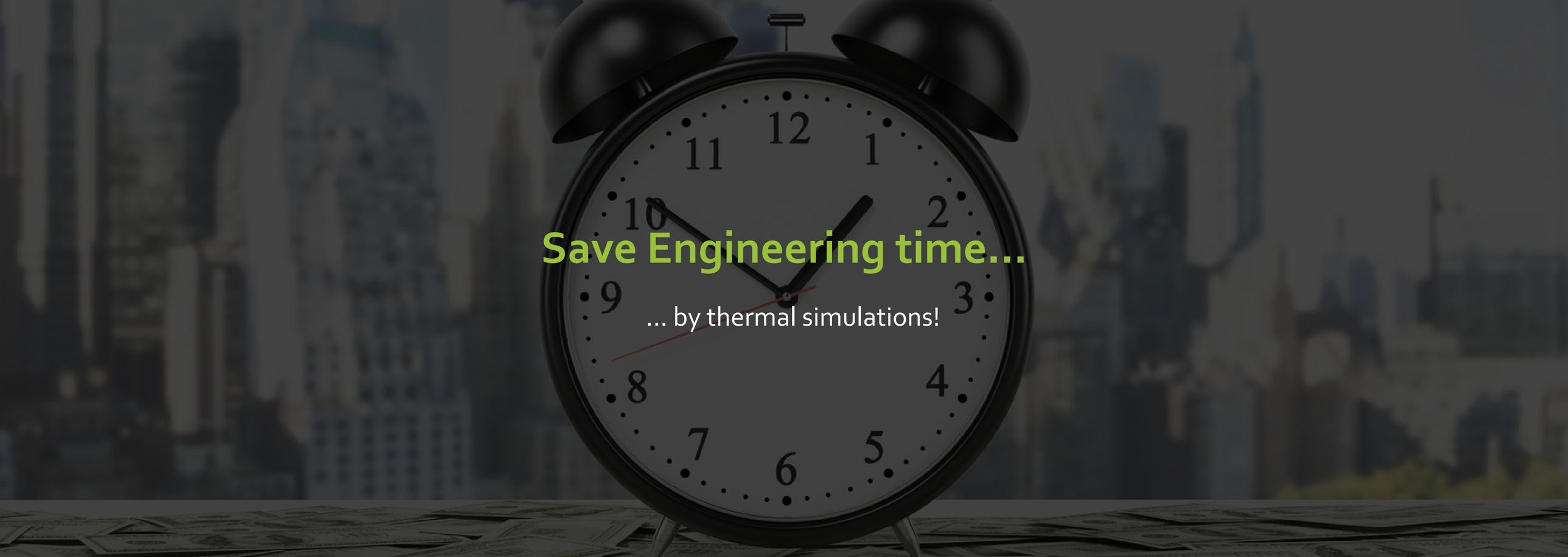

Save Engineering time…
… by thermal simulations!

Fake it to make it

Continuously growing requirements and more and more complex applications make sophisticated preparation indispensable – in particular in regards to performance and costs optimization in markets changing more and more rapidly.

By involving thermal simulations in system development in the beginning of a development, thermal problems can be detected and eliminated at an early stage. It offers the most efficient way to visualize temperature trends and flow conditions. In a worst case scenario neglecting thermal management can lead to the complete failure of a project.

In order to help their customers reach their goals faster, EKL AG has enlarged its development department substantially and further optimized their processes. EKL AG works with the simulation software FloEFD™ manufactured by Mentor Graphics which is based on CFD methods. In combination with the latest hardware EKL AG now owns increased processing power to keep simulation times short.

Based on our long time experience in developing and simulating of cooling solutions, we have divided our services into 3 categories:

Development, prototyping, pre-series and mass production

Everything from one source

Categories Thermal simulations

	Category Basic	Category Plus	Category Premium
Analysis and evaluation Thermal simulation and evaluation of the actual state (3D model available)	•	•	•
Optimization through material / fan selection Thermal / cost optimization through material / fan selection	•	•	•
Optimization through manufacturing technologies Thermal / cost optimization through manufacturing technologies		•	•
Optimization through mechanical changes Thermal / cost optimization through mechanical changes		•	•
Customized cooling solution Mechanical and thermal design of a customized cooling solution			•

Basic

Is best for you in case...

... you want to investigate and improve the performance level of your system

... you want to optimize your cooling solution used so far as to costs

... want to find out how you can increase the performance of your existing cooling solution
(Through modification of the material or changing the fan type)

The advantages gained by using thermal simulations are:

- Detection and elimination of thermal problems
- Modification by changing the materials / fan type
- Cost optimized cooling solution

Lifetime

Increase the lifetime of your product!

Plus

is best for you in case...

... you want to detect the performance of your existing or planned cooling solution

... you want to optimize your existing or planned cooling solutions to costs and performance

... want to find out how you can increase the performance of your existing or planned cooling solution
(By modification of the manufacturing technology, the material or the fan selection, etc.)

... if you want to make design changes to the cost / performance optimization of your cooling solution

The advantages gained by using thermal simulations are:

- Detection and elimination of thermal problems
- Performance and / or cost optimization of your cooling solution without any major development effort
- Early detection of hotspots in the system
- Detection of further optimization potential in system structure
(e. g. size reduction with constant performance, alignment of components, size and number of air vents in housing)

Optimization

Detect further optimization potential for your cooling solution as well as on a system basis

Premium

is best for you in case...

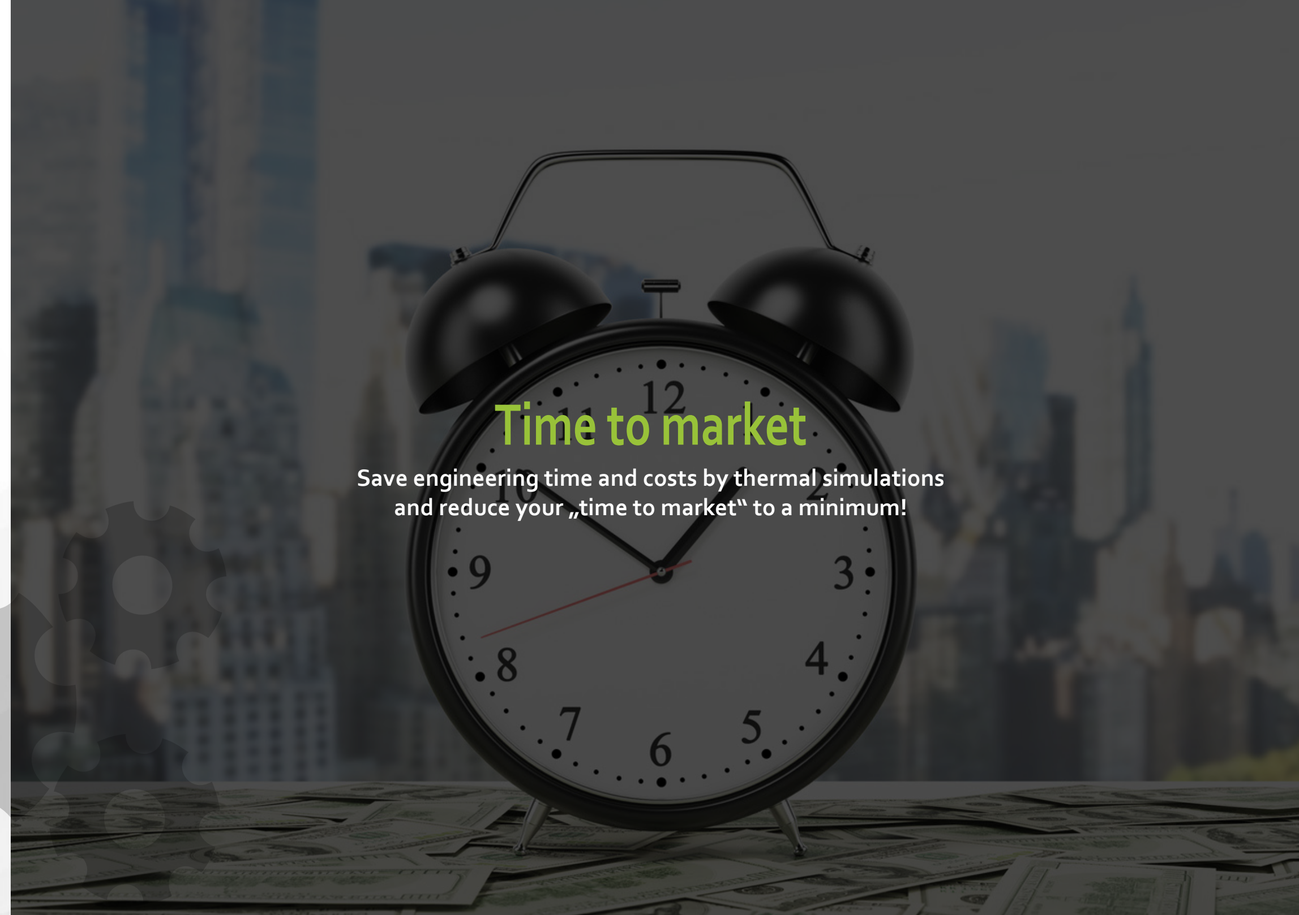
... you require the optimal cooling solution for your development

... you want to check and optimize a planned cooling solution for your development as to costs and performance

... you require several cooling solutions for different performance classes

The advantages gained by using thermal simulations are:

- Avoiding thermal problems as early as in planning phase
- Huge time savings in development
  (less development loops)
- Predictable developtment costs
- Shorter prototype phases
- Performance and cost optimized cooling solutions
- Early detection of HotSpots in the system
- Detection of further optimization potential in system structure
  (e.g. size reduction with constant performance, alignment of components size and number of air vents in housing)



Time to market

Save engineering time and costs by thermal simulations and reduce your „time to market" to a minimum!

01

CUSTOMER REQUIREMENT

- Installation condition
- Thermal performance of the components
- Surrounding temperature ...

02

CONSTRUCTION

- Best possible useage of available space
- Select the most suitable and cost-effective manufactoring technology

03

SIMULATION

- Huge time savings in development
- Avoidance of developtment loops
- Optimization potential in system structure

04

PROTOTYPING

- Measurement of the prototype
- Direct comparison to simulation results
- Customer release / modifications

05

PRE-SERIES

- Tooling production
- Pre-series delivery
- Cost optimized mass production

06

LOGISTICS

- Weekly air and sea freight
- Large warehouse in Leutkirch
- Consignment and frame order agreements

07

SERIES DELIVERY

- Quality assurance in house (up to 100% on request)
- German contact persons
- Finishing in Leutkirch possible (added value) i. e. assembly of ebm-papst fans

Did we arouse your interest?

Just send us a request to **simulation**@ekl-ag.de.
We gladly send you an individual offer after a review of your construction data (3D).

More informations:

www.fake-it-to-make-it.com

EKL®

electronics cooling

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