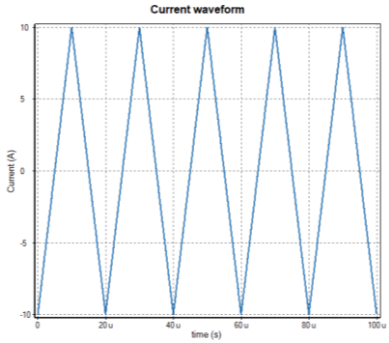
SmartNetics

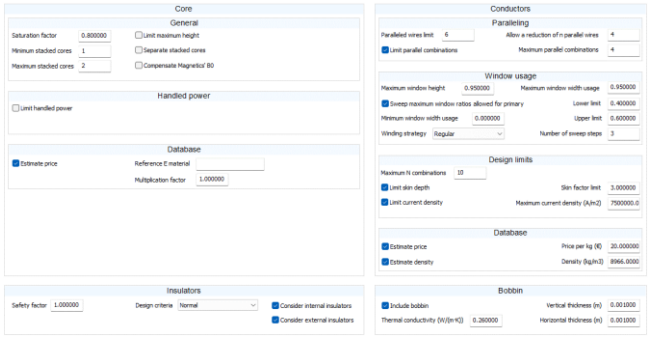
Power Smart Control SL

A single magnetic design tool for experts and newcomers

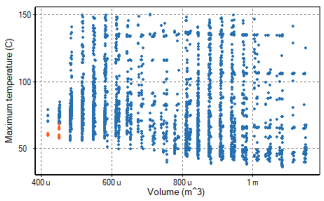
Speed up your magnetic design in 3 steps

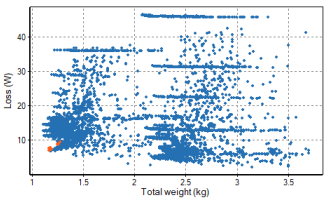
1 Enter the minimum required data or manually adjust every parameter

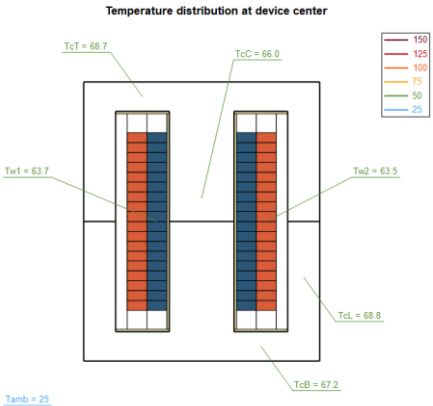


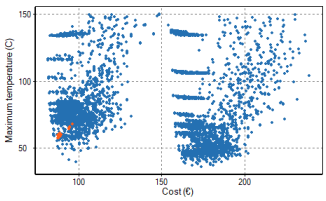


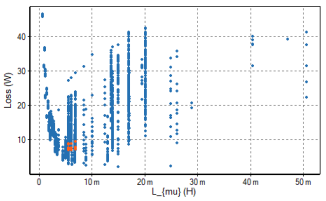
Select the device that best suits your needs 2





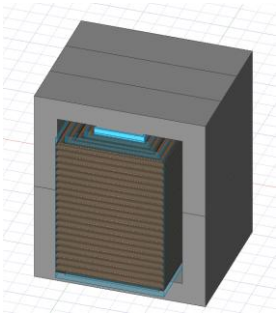


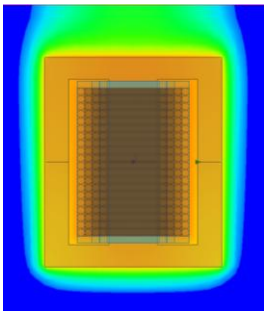




3 Get detailed results and automatically export to FEA tools

Parameter	Units	Value
Magnetizing inductance referred to primary	mH	9.34
Primary leakage inductance	nH	458
Secondary leakage inductance	nH	577
Secondary leakage inductance (referred to primary)	nH	577
Effective current at primary side	A	5.77
Current density at primary side	A/mm^2	0.463
Effective current at secondary side	A	5.77
Current density at secondary side	A/mm^2	0.463
Primary winding DC resistance	$m\Omega$	7.54
Secondary winding DC resistance	$m\Omega$	9.5
Primary winding loss	mW	285
Secondary winding loss	mW	359
B peak	mT	35.9
Core loss	W	1.02
Primary winding weight	kg	0.807
Secondary winding weight	kg	1.02
Core weight	kg	3.02
Total weight	kg	4.85





Versatile A single design tool for experts and newcomers

Adaptable Multi-objective optimization

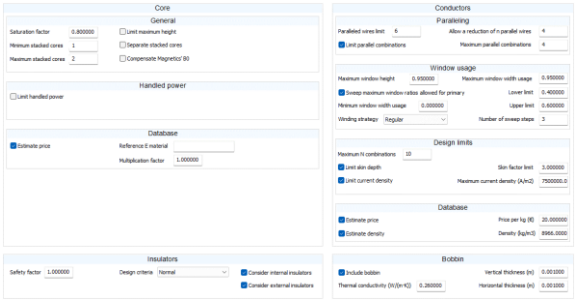
In-depth Not a black-box design. Provides full information of the device

Precise Automatic 3D and 2D model generation for FEA tools

Scalable From low to high power magnetics in a single tool

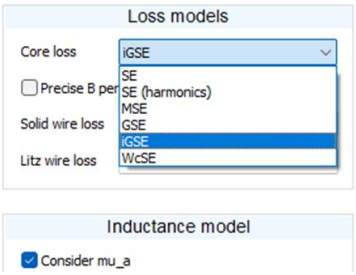
For every user

If you are an expert magnetic designer: tweak every design parameter to fit your needs.
If you are new to magnetic design or are in a hurry: Let the tool decide everything for you!



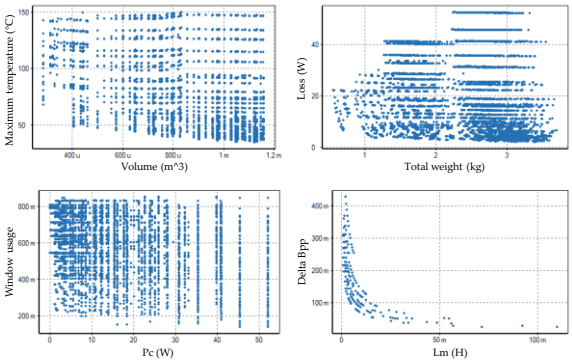
State-of-the-art models

The use of state-of-the-art models for inductance, losses and temperature allows a fast and accurate comparison of every design possibility.
Accurately design thousands of devices before performing a FEM simulation of the desired one.



Powerful intuitive interface

The tool allows the selection of up to 8 figures of merit at the same time to achieve the device with the best performance for any application.

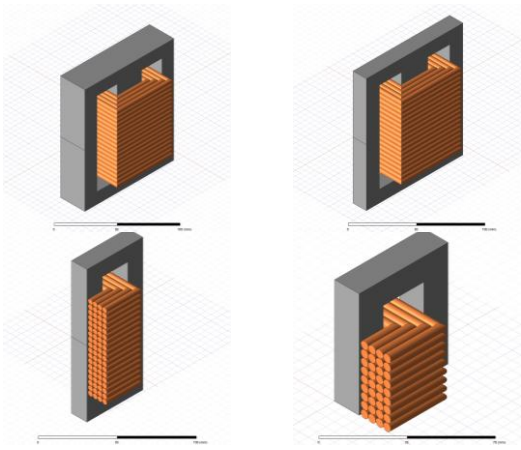


You can achieve the smallest, the lightest, the cheapest or the most efficient device or any trade-off between any figure of merit. Select the device that best fits your needs!

Optimized accurate simulations

The 3D model accurately represents real wires, allowing a realistic simulation of electric and magnetic fields and temperature distribution.
Symmetries are considered to save simulation time and resources while maintaining a high accuracy.

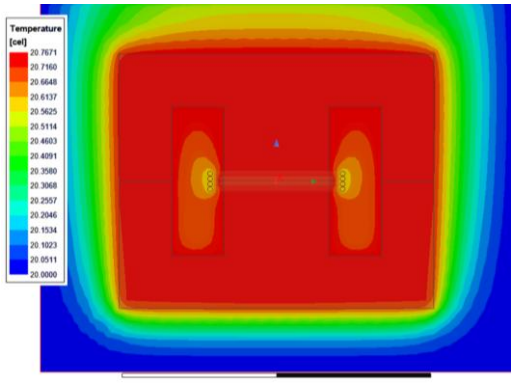
Full model | Half symmetry



Quarter symmetry | Eighth symmetry

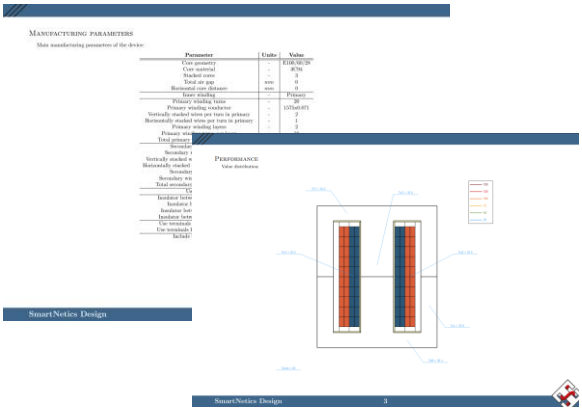
Temperature distribution

The temperature distribution in core, windings and insulation is included in the model, to ensure the selected device will be able to work within imposed limits. Natural and forced convection are available.
The temperature can also be verified in Ansys-Icepak thanks to the automatic export options.



Report

Automatically generate a high-resolution PDF report with everything you need: performance indicators, materials to buy, manufacturing parameters, inputs used, etc.
You can even configure what to include and personalize it with your own logos and comments.



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