

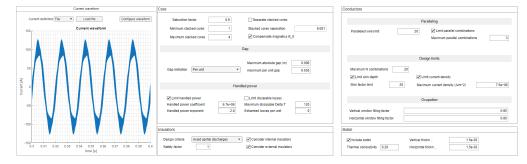


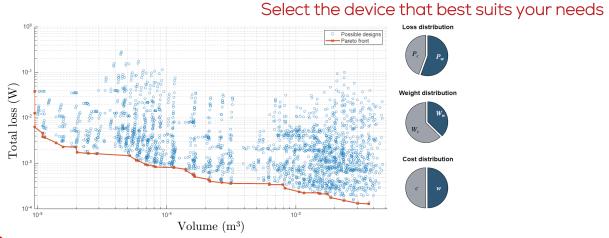
2

A single magnetic design tool for experts and nonexperts

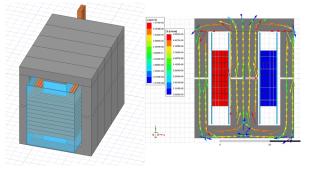
Speed up your magnetic design in 3 steps

Enter the minimum required data or manually adjust every parameter





3 Automatically build your 3D and 2D FEA models



		Versatile	A single design tool for experts and nonexperts
	$\begin{array}{c} \bullet \bullet \bullet \bullet \\ \bullet \bullet \bullet \bullet \\ \bullet \bullet \bullet \bullet \end{array}$	Adaptable	Multi objective optimization
-1/~		In-depth	Not a black-box design. Provides full information of the device
	Rep	Precise	Automatic 3D and 2D model generation for FEA tools
		Scalable	From low to high power magnetics in a single tool

For every user

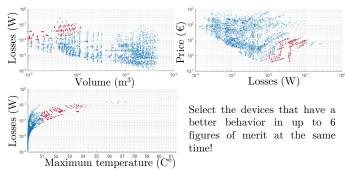
If you are an expert magnetic designer: twitch every design parameter to fit your needs.

If you are new to magnetic design or are in a hurry: Let the tool decide everything for you!

Core	Conductors		
Saturation tactor 0.0 Separate staceed cores Minimum stacked cores 1 Stacked cores separation 0.001 Meanum stacked cores 4 2 Comprensite magnetics 8_0	Parallelog Peralelo we init 20 Peralelo we init 20 Peralelo we init 30 Peralelo we ini		
Gap			
Maximum absolute pite (m) 0.056 Gap Instation Per unit • 0.035	Design limits Maximum N combinations 20 G Limit skin depth D Limit current feinsty		
Handled power	Skin factor limit 20 Maximum current density (Alm*2) 7.5e+06		
Climit handled power Limit dissipable losses Handled power coefficient Andled power coefficient Andled power expanent 2.4 Estamted losses per unit 0	Ocupation Vertical vindour filing factor 0.95		
	Horizontal window filing factor 0.95		
Insulators	Bobin		
Design criteria Avoid aptial discharges ♥ Consider internal insulators Safety factor 1 ♥ Consider enternal insulators	∑Include bobin Vertical thich 159-63 Thermal conductivity 0.28 Horocreal thicks 1.59-63		

Powerful intuitive interface

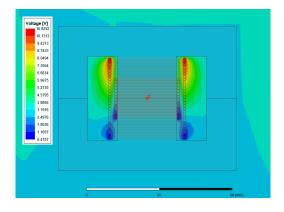
The tool allows the selection of up to 6 figures of merit at the same time to achieve the device with a best performance for any particular need.



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!

Electric field

The electric field inside and outside the magnetic device is considered and the needed insulation is provided. The risk of partial discharges is taken into account to ensure a long lifespan of the magnetic device. The electric field is included in 3D and 2D FEA models.



State-of-the-art models

The use of sate-of-the-art models for inductance, losses and temperature allows a fast and accurate comparison of every design possibility.

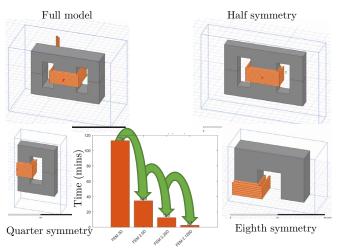
Accurately design thousands of devices before FEM simulating the desired one.

Loss models		
Core loss	igse 🔹)
Precise B period calcula	SE	
Single wire loss	SE (harmonics)	
Litz wire loss	MSE	
Enz wire 1055	GSE	
Inductance model	iGSE	
Consider mu_a	WcSE	

Optimized accurate simulations

The 3D model accurately represents real wires, allowing a real simulation of electric and magnetic fields and temperature distribution.

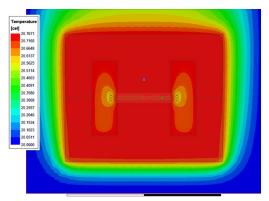
Symmetries are considered to save simulation time and resources while maintaining a high accuracy.



Temperature distribution

The temperature distribution in core, windings, insulation and surrounding ambient is included in the model, to ensure the selected device will be able to work within imposed limits.

The temperature is included in 3D and 2D FEA models.





Power Smart Control SL

Avda. Gregorio Peces Barba, 1 28919 Leganes (Madrid), Spain



sales@powersmartcontrol.com

