

## 14. ELECTRICAL MACHINE DESIGN SOFTWARE

Table below lists all Finite Element Magnetic field software used to design electric machines worldwide. Table (A) Free Software and (B) Commercial FEM Software list those that use mostly 2D or 3D FEM models. Other tables list software specific to the Design of Motors and Inductors – they use 1D (discrete) models.

The capabilities of all these software are limited. For example, some have only couple of B(H) curves, and few have no core loss curves. So it is possible that purchasing a software without careful review may lead to disappointment. If you need assistance in choosing a software that matches your specific needs, please contact: [rao@magweb.us](mailto:rao@magweb.us)

(A) FREE SOFTWARE			
No.	Software	Firm	Website
1	FEMM	FEMM, USA	<a href="http://femm.info/wiki/Download">femm.info/wiki/Download</a>
2	EMETOR	Emetor, USA	<a href="http://emetor.com">emetor.com</a>
3	MotorAnalysis	VepcoTech, Russia	<a href="http://motoranalysis.com">motoranalysis.com</a>
4	KOIL	Free Univ, Italy	<a href="http://Koil.sourceforge.net">Koil.sourceforge.net</a>
5	MAXFEM	Univ. Santiago	<a href="http://usc.es/en/proyectos/maxfem/download.html">usc.es/en/proyectos/maxfem/download.html</a>
6	FEMAG	ETH, Switzerland	<a href="http://elmocad.de_profemag.ch">elmocad.de_profemag.ch</a>
7	POISSON	LANL, USA	<a href="http://laacg.lanl.gov/laacg/services/download_sf.shtml">laacg.lanl.gov/laacg/services/download_sf.shtml</a>
8	VIZIMAG	VIZIMAG, USA	<a href="http://vizimag.software.informer.com/3.1">vizimag.software.informer.com/3.1</a>
9	ELMER	CSC, Finland	<a href="https://sourceforge.net/projects/elmerfem/">https://sourceforge.net/projects/elmerfem/</a>
10	GETDP	GETDP, Finland	<a href="http://onelab.info/wiki/GetDP">http://onelab.info/wiki/GetDP</a>

(B) COMMERCIAL FEM SOFTWARE			
No.	Software	Firm	Website
1	BIOT	Ripplon, Canada	<a href="http://ripplon.com/software.html">ripplon.com/software.html</a>
2	COMSOL	COMSOL, Sweden	<a href="http://comsol.com">comsol.com</a>
3	CST	CST, Germany	<a href="http://cst.com">cst.com</a>
4	EMWORKS	EM Works, Canada	<a href="http://emworks.com">emworks.com</a>
5	FEKO	Elec.Mag., South Africa	<a href="http://feko.info">feko.info</a>
6	FLUX	Altair, France	<a href="http://cedrat.com/software/flux/">cedrat.com/software/flux/</a>
7	Motor Rewind	EASA, USA	<a href="http://www.easa.com/resources/software">http://www.easa.com/resources/software</a>
8	JMAG	Jmag Intl, Japan	<a href="http://jmag-international.com/products">jmag-international.com/products</a>
9	MAGNET	Infolytica, Canada	<a href="http://infolytica.com">infolytica.com</a>
10	MAGNETO	Integ. Engg , Canada	<a href="http://integratedsoft.com">integratedsoft.com</a>

11	<b>MAGNUM</b>	Field Precision, USA	<a href="http://fieldp.com">fieldp.com</a>
12	<b>MAXWELL</b>	Ansys Inc, USA	<a href="http://ansys.com/products/electronics/ansys-maxwell">ansys.com/products/electronics/ansys-maxwell</a>
13	<b>OPERA</b>	Cobham Tech., UK	<a href="http://operafea.com">operafea.com</a>
14	<b>QUICKFIELD</b>	Tera Anal., Denmark	<a href="http://quickfield.com">quickfield.com</a>
15	<b>SAMARIUM</b>	Vitatech, India	<a href="http://vitatechindia.com/welcome.php">vitatechindia.com/welcome.php</a>

<b>(C) MOTOR DESIGN SOFTWARE</b>			
1	<b>BLDC 3.0</b>	Magneforce, USA	<a href="http://magneforcess.com">magneforcess.com</a>
2	<b>BLDC</b>	Yeadon Energy, USA	<a href="http://yeadoninc.com">yeadoninc.com</a>
3	<b>FLUX</b>	Altair, France	<a href="http://cedrat.com/software/flux/flux-rotating-machines-package/">cedrat.com/software/flux/flux-rotating-machines-package/</a>
4	<b>MANATEE</b>	EoMYS, France	<a href="http://eomys.com">eomys.com</a>
5	<b>MotorCAD</b>	Motor Design Ltd, UK	<a href="http://motor-design.com/motor-cad-software">motor-design.com/motor-cad-software</a>
6	<b>Motorsolve</b>	Infolytica, Canada	<a href="http://infolytica.com">infolytica.com</a>
7	<b>RMXPRT</b>	ANSYS, USA	<a href="http://ansys.com/products/electronics/ansys-rmxprt">ansys.com/products/electronics/ansys-rmxprt</a>
8	<b>SPEED</b>	Siemens/CD-Adapco	<a href="http://speed-emachine-design.com">speed-emachine-design.com</a>

<b>(D) INDUCTOR DESIGN SOFTWARE</b>			
1	<b>(FREE)</b>	Micrometals	<a href="http://micrometals.com/software.html">micrometals.com/software.html</a>
2	<b>(FREE)</b>	Magnetics	<a href="http://mag-inc.com/design/software">mag-inc.com/design/software</a>
3	<b>INTUSOFT</b>	Intusoft	<a href="http://www.intusoft.com/mag.htm">www.intusoft.com/mag.htm</a>
4	<b>PEXPRT</b>	ANSYS	<a href="http://ansys.com/products/electronics/ansys-pexpert">ansys.com/products/electronics/ansys-pexpert</a>
5	<b>Choke</b>	Rale	<a href="http://rale.ch/">rale.ch/</a>
6	<b>Power</b>	Ridley Engg	<a href="http://ridleyengineering.com/software.html">ridleyengineering.com/software.html</a>