

## FEATURES

- Microsoft ® Windows™ based program
- Analysis tool used in design of Permanent Magnet DC Motors
- Computes all relevant motor parameters
- Allows printing of inputs, outputs & graphs
- Multi-window tasking
- Important constants built into program
- Variable definitions instantly available on screen
- Reduces development cycle time and cost
- Instantly check effects of design change
- Maximizes material usage
- On-line design tips
- Reduce number of prototype iterations

## Actual Customer Comments

- “Your software is very intuitive.”
- “It is so easy to use!”
- “You can tell that this software was written by someone who had to design motors for a living.”

## FEATURES con’t

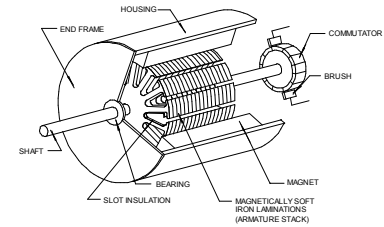
- Inputs:
  - Dimensions, material properties and winding information
- Outputs:
  - Magnetic circuit information including flux densities and MMF drops
  - Mechanical information, weights and inertias
  - Winding information including copper weight and slot fill
  - Performance; speed-torque, current, losses and efficiency, graph
  - Does thermal calculations
  - Motor constants
  - Cost data of design

Call or email us for a demo, additional information, or to place an order.

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## PMDC MOTOR DESIGN



## ANALYSIS SOFTWARE

## BENEFITS

- **Design it yourself, faster.**
- **Can pay for itself in one design project.**
- **Saves time and money.**
- **Fast, accurate results.**
- **Optimize motor costs.**

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MasterCard, Visa, Discover and American Express are accepted for your convenience.

# SAMPLES OF PMDC INPUT AND OUTPUT WINDOWS

Yeadon Energy Systems, Inc. \* 514 West Maple Street \* Iron River, MI 49935

Permanent Magnet DC Design 1.43 - Demo.ypl

File Edit Input Output Calculate Graph Materials Window Units Help

Designer  Description  Graph Calculate

Arm CB Hsg IL Mag Elec Sh LS \$In FYI NoL Lck Sp1 Sp2 Mec Wdg M C MK \$\$\$

X-Section **YES**

**Magnet Data**

Magnet Shape  
 Arc Magnet Segments  
 Rectangular Segments

Magnet Material & Properties

has demagnetization information

Br	3850.0	Gauss
Hc	2900.0	Oersted
Bknee	0.0	Gauss
Hknee	0.0	Oersted
Pc_knee	0.0000	

**Magnet Dimensions**

Theta_P	130.0	deg
Lmr	0.2500	inch
Lma	2.5000	inch
TMag	23.0	deg C

**Motor Constants**

Kt	7.27	oz-in
Kbe	5.381	volts
Kbm	0.0513	Volts
Tm	0.0104	sec
	0.260768	

**Locked Rotor**

Rt	0.548	Ohms
I_Lock	21.88	Amps
G_Lock	20750.8	Amps/sq. in.
G_BL	700.2	Amps/

**Cross-Section of Motor**

Print Axial View Close

**Speed-Torque-Current Curve**

Options Help

Torque Speed Current Power Efficiency

**Electrical Data**

Wire Insulation  
 Single Build  
 Heavy Build

Winding Type  
 Lap Wound  
 Wave Wound

Et	12.00	Volts
TPC	28	Turns
Ga	21.0	AWG
P	2	Poles
Pa	2	Paths
Nbr	2	Brushes
Fws	1.100	
Span	3	Teeth
Makew	0.00	Teeth

**MMF Drops in Motor**

Ft = 9.5% Ft = 0.3%  
 Fh = 11.8% Fy = 3.7%  
 Fg = 47.8% FDL = 26.9%  
 FBL = 0.0%

Close

Start Permanent Magnet DC De... 9:40 AM