

FEATURES

- Microsoft ® Windows™ based program
- Analysis tool used in design of Inner-Rotor and Outer-Rotor 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

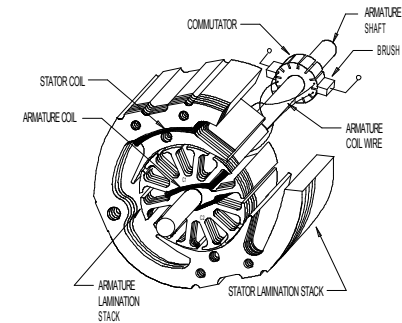
- Inputs:
 - Dimensions, material properties and winding information
 - Square or round frame options
- Outputs:
 - Magnetic circuit information including flux densities and MMF drops
 - Mechanical information, weights and inertias
 - Winding information including copper weight and slot fill
 - Performance;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

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

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UNIVERSAL 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 UNIVERSAL INPUT AND OUTPUT WINDOWS

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

Universal Motor Design 1.1 - DEMO.YU1

File Edit Input Output Calculate Graph Materials Window Help Services

Designer **AEM** Description **Demo Motor** **Graph** **Calculate**

Arm C&B Stat I L EL 1 **EL 2** Shaft LS \$ In No L Lock Spd1 Spd2 Mec Wdg MC1 MC2 M K \$\$\$

X-Section **YES**

Armature Dim's

Armature Steel Type
M 45

Shape of Armature Slot
 Round
 Flat

Da 1.5060 inch
Da1 1.3260 inch
Da2 0.8000 inch
Wast 0.0860 inch
0.0730

Speed 1 Load Parameters

SLoad1	15000.0	RPM	Wa1	7.8502	Watts
Iload1	1.73	Amps	Wb1	0.1907	Watts
TLoad1	8.49	oz-in	Wc1	26.5796	Watts
PoutLoad1	0.1263	Hp	Wf & W1	58.6809	Watts
PoutLoad1	94.2	Watts	CL_Tot1	5.6968	Watts
EffLoad1	48.8	%	Etf1	25.2778	Volts
Wi1	193.2325	Watts			

Cross-Section of Motor

Close

Winding Information

Armature Winding Information

Span	5	Teeth	Cs	2	Sides	Xapf_t	6.120	Ohms
Ztot	1080.0	Conductors	Psi_fa	1.24	Xas	0.374	Ohms	
Zeff	912.4	Conductors	WtcA	0.1251	Xae	0.112	Ohms	
Lmeta	1.2041	inch	WtcA1	2.0014				
Lmta	4.9081	inch	Rac	1.054				
Filla	46.22	%	Rarm	2.634				

Stator Winding Information

Lmetf	2.0374	inch	WtcF	0.2218
Lmtf	6.5749	inch	Rfc	1.733
Fillf	49.40	%	Rf	3.466

Electrical Data 2

General Electrical Data

Line Current Frequency
 60 Hertz
 50 Hertz
 DC Supply

Et 120.00 Volts
 P 2 Poles
 Tamb 23.0 deg C

Speed-Torque-Current Curve

Graph showing Speed-Torque-Current curves for TLoad1 and TLoad2. The x-axis is Torque (oz-in) from 0.0 to 90.0. The left y-axis is RPM from 0 to 25000. The right y-axis is Output Watts from 0 to 250.0. Curves include RPM (black), Output Watts (green), and Efficiency (%) (blue). Key data points are marked: (2.0, 15000 RPM), (4.0, 10000 RPM), (6.0, 8000 RPM), (8.0, 6000 RPM), (10.0, 4000 RPM), (10.0, 15000 RPM), (10.0, 10000 RPM), (10.0, 6000 RPM), (10.0, 4000 RPM), (10.0, 20.0 Watts), (10.0, 40.0%), (10.0, 60.0%), (10.0, 80.0%), (10.0, 100.0%).