

Motor Calculator build MCALC32ab 1/19/2012 610pm

Please read the MCALC\_README.TXT file for important notes!

Select motor:

1) CIM      6) FP0673      d) FP2719      f) FP9012      g) FP9015      h) FP9013  
a) am-0912      b) am-0914      7) DensoL      8) DensoR      c) Denso0160      u) UserDefined  
2) RS395      3) RS540      4) RS550      e) RS775-12      5) RS775-18      x) exit      b

There are different motor data specs for the am-0914.  
Select the spec you want to use:

- 1) Data from AndyMark web page for am-0914 as of 1/18/2012 12:30pm ET  
derived by AndyMark  
from 1/12/2012 Whirlpool lab testing of 4 brand-new motors
- 2) Data for used (broken-in) motor derived from  
1/12/2021 Whirlpool lab testing of broken-in Sample1 motor

3) Data from FRC motor data table "MotorInfo4.1.pdf" as of 1/18/2012 12:30pm  
3

am-0914 (PG71) MotorInfo4.1.pdf [spec Option #3] @ 12.00 volts:

@ free (no load):

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
0.0	0.000	84	100.0	0.6	0.0	7.2	0.0

@ stall:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
3101.0	21.898	0	0.0	22.0	0.0	264.0	0.0

@ max power:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
1550.5	10.949	42	50.0	11.3	48.2	135.6	35.5

@ max efficiency:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
443.0	3.128	72	85.7	3.7	23.6	43.9	53.7

Select input:

1) oz-in      7) watts\_in      3) rpm      5) amps      8) eff%  
2) Nm      6) watts\_out      4) rpm%      9) volts      a) rpm&ozin      a

Enter motor rpm & ozin, and the program will calculate the motor voltage  
required to produce the specified ozin at the specified rpm.

Enter rpm and ozin, separated by a space: 0 850

am-0914 (PG71) MotorInfo4.1.pdf [spec Option #3] @ 3.29 volts:

@ free (no load):

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
0.0	0.000	23	100.0	0.2	0.0	0.5	0.0

@ stall:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
850.0	6.002	0	0.0	6.0	0.0	19.8	0.0

@ max power:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
425.0	3.001	12	50.0	3.1	3.6	10.2	35.5

@ max efficiency:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
110.8	0.782	20	87.0	0.9	1.6	3.1	53.7

am-0914 (PG71) MotorInfo4.1.pdf [spec Option #3] @ 3.29 volts:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
850.0	6.002	0	0.0	6.0	0.0	19.8	0.0

Select input:

1)oz-in    7)watts\_in    3)rpm    5)amps    8)eff%  
 2)Nm    6)watts\_out    4)rpm%    9)volts    a)rpm&ozin