

Motor Calculator build MCALC32k 1/13/2012 850p

Please read the MCALC_README.TXT file for important notes!

Select motor:

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

RS550 stall torque changed to 70.5 oz-in per 2012 FRC specs

M5-RS550-12 (-B) @ 12.00 volts:

@ free (no load):

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
0.0	0.000	19300	100.0	1.4	0.0	16.8	0.0

@ stall:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
70.5	0.498	0	0.0	85.0	0.0	1020.0	0.0

@ max power:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
35.3	0.249	9650	50.0	43.2	251.5	518.4	48.5

@ max efficiency:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
8.0	0.057	17105	88.6	10.9	101.4	130.9	77.5

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

Select motor:

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

M7-RS775-18 @ 12.00 volts:

@ free (no load):

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
0.0	0.000	13000	100.0	1.8	0.0	21.6	0.0

@ stall:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
112.8	0.797	0	0.0	86.7	0.0	1040.4	0.0

@ max power:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
56.4	0.398	6500	50.0	44.3	271.2	531.0	51.1

@ max efficiency:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
14.2	0.100	11363	87.4	12.5	119.4	149.9	79.7

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 70.5

M7-RS775-18 @ 7.50 volts:

@ free (no load):

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
0.0	0.000	8122	100.0	1.1	0.0	8.4	0.0

@ stall:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
70.5	0.498	0	0.0	54.2	0.0	406.2	0.0

@ max power:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
35.3	0.249	4061	50.0	27.6	105.9	207.3	51.1

@ max efficiency:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
8.9	0.063	7099	87.4	7.8	46.6	58.5	79.7

M7-RS775-18 @ 7.50 volts:

oz-in	Nm	rpm	rpm%	amps	watts out	watts in	eff%
70.5	0.498	0	0.0	54.2	0.0	406.2	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