Transmagnetics 48v 4" motor (ca. 2008)

Headline 24V/50A controller
CW rotation

24 Volts
Full throttle

Power (Drain Brain)	Power (PowerTap)	Efficiency
33	0	0.0%
93	55	59.1%
150	105	70.0%
222	158	71.2%
318	218	68.6%
426	267	62.7%
606	287	47.4%

Half Throttle

Power (Drain Brain)	Power (PowerTap)	Efficiency
20	0	0.0%
89	54	60.7%
202	118	58.4%
380	142	37.4%

36 Volts
Full throttle

Power (Drain Brain)	Power (PowerTap)	Efficiency
60	0	0.0%
162	108	66.7%
264	207	78.4%
420	325	77.4%
564	418	74.1%
756	515	68.1%
1248	633	50.7%

Half Throttle

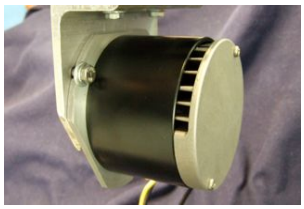
Power (Drain Brain)	Power (PowerTap)	Efficiency
30	0	0.0%
87	57	65.5%
144	107	74.3%
145	108	74.5%
234	170	72.6%
306	203	66.3%
594	242	40.7%

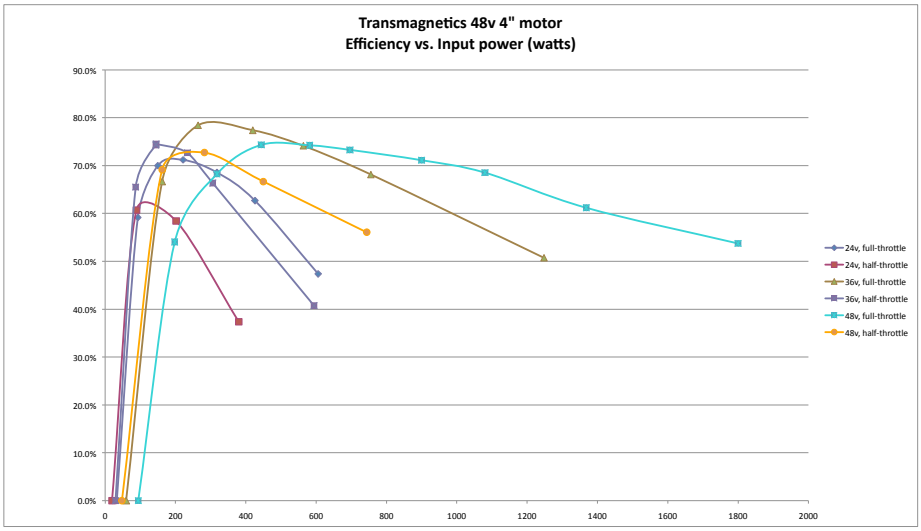
48 Volts
Full throttle

Power (Drain Brain)	Power (PowerTap)	Efficiency
94	0	0.0%
198	107	54.0%
318	217	68.2%
444	330	74.3%
582	432	74.2%
696	510	73.3%
900	640	71.1%
1080	740	68.5%
1368	837	61.2%
1800	967	53.7%

Half Throttle

Power (Drain Brain)	Power (PowerTap)	Efficiency
48	0	0.0%
162	112	69.1%
282	205	72.7%
450	300	66.7%
744	417	56.0%





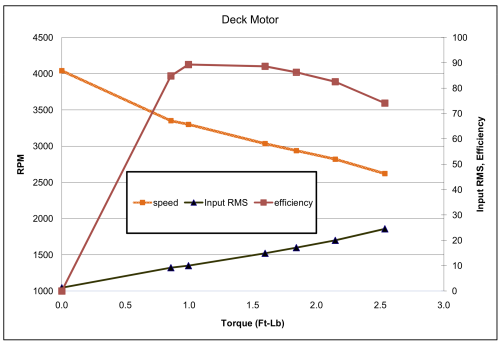
Notes: Efficiency was measured by comparing energy drawn from the battery according to a Cycle Analyst and comparing that to energy sent to the rear wheel of the bicycle as read from a PowerTap hub. Motor power passes through a chain and sprocket (#25 chain; 15t - 90t) to a mid-drive, which is then passed to the rear wheel using normal bicycle chain (15t - 34t). Efficiency of the two-stage chain and sprocket drive is probably around 94%, so actual motor/controller efficiency is about 6% greater.

Transmagnetics, Inc.

Tested 12/12/08

420- 22 x 1.2mm: with 1041, 48V

RPM	Trq ft-lb	Input RMS	Voltage	P-in watts	P-out watts	P-out HP	Efficiency
4040	0.00	1.3	52.3	68.0	0.0	0.00	0.0
3350	0.86	9.2	52.2	480.2	407.3	0.55	84.8
3300	0.99	10	52.2	522.0	466.2	0.62	89.3
3034	1.60	14.9	52.1	776.3	687.8	0.92	88.6
2938	1.84	17.1	52.1	890.9	768.4	1.03	86.3
2820	2.15	20	52.1	1042.0	860.0	1.15	82.5
2620	2.54	24.5	52	1274.0	944.0	1.27	74.1



Manufacturer's Data